

ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC WORKS

OF THE

PROVINCE OF ALBERTA

1917

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY



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1918



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EDMONTON, March 18th, 1918

To His Honour

ROBERT GEORGE BRETT,

Lieutenant Governor of the Province of Alberta.

May It Please Your Honor:—The undersigned has the honour to submit herewith the Report of the Department of Public Works for the year ending December 31st, 1917.

Respectfully submitted,

A. J. McLEAN,

Minister of Public Works.



REPORT

OF THE

DEPUTY MINISTER OF PUBLIC WORKS

HON. A. J. McLEAN,

Minister of Public Works.

SIR,—I have the honour to submit herewith the Report of the Department of Public Works for the year 1917.

The work has been carried on as satisfactorily as possible under existing conditions, but the high price of material, and the scarcity of labor, rendered it imperative that only works of absolute necessity be carried out, and that all others stand over until conditions once more become normal.

Increased production from the land is, of course, the end to which the greatest endeavors of all must be put forth at the present time. An important factor in this problem is the construction and maintenance of highways. It is natural, therefore, that the expenditure in this branch of the work should be heavier than in any other. During the past season much difficulty was encountered, however, in the work, owing to the scarcity of men and teams.

Maintenance of the highways already constructed received increased attention during the year, with most satisfactory results, and it is pleasing to note that the importance of road maintenance is becoming more and more appreciated by the local authorities. The desire on their part, in many districts, to co-operate with the Department in this connection is most encouraging.

One cannot pass over this branch of the work without expressing appreciation of the hearty co-operation and assistance given by the various automobile clubs, whose organizations were of material assistance in reporting on road conditions in many parts of the country.

The efforts being put forth by the U. F. A., the municipal organizations, and the automobile clubs to educate everyone in regard to the actual money value of good roads, are deserving of the highest praise.

The only steel bridges erected during the year were a few for which material had been ordered in 1916. Some fairly large structures in timber were, however, undertaken and good progress made, although this work also was handicapped by shortage of skilled labor.

The ferry service was continued as usual, and six new ferries installed.

The report of the Engineer of Highways gives details in regard to roads, bridges and ferries.

The provisions of The Drainage Act have been taken advantage of to a considerable extent during the past season, with the end in view of bringing more land under cultivation in certain wet areas. Petitions were received for the formation of several Drainage Districts. A number of these are well under way and in at least one case, it is probable that tenders will shortly be called for and the work proceeded with early this season. Several other districts should reach the same stage before a great while.

The report of the Drainage Engineer gives particulars in detail.

In the Architectural Branch no new work of any consequence was undertaken, the scarcity and high cost of material and labor rendered work difficult. Engineering shops for the Institution of Technology and Art, at Calgary, were well under way towards completion at the end of the year, and certain repairs and alterations were carried out in connection with existing buildings. The work of supervising and approving of school plans increased greatly. The report of the Provincial Architect gives full particulars in regard to the work.

In the Surveys Branch, more work was done than usual for some years past, as an additional party was placed in the field to meet the great demand for location of road diversions by local municipal organizations, but as is usual there is a large list of work awaiting our engineers for the coming year. The season was a very favorable one, and in spite of great difficulty in securing labor, a large amount of work was accomplished.

The service given to the local organizations, by the Surveys Branch, is highly appreciated by them, judging from the requests for such work, and in fact, owing to the large amount of work and the difficulty in obtaining help, it appears likely that we will have to organize the parties on slightly different basis during the coming season to meet the existing conditions and cover the necessary ground. The report from the Surveys Branch shows the amount of work done last season.

In the report of the Mines Branch, it will be noted that the output of coal during the year exceeded that produced during the year 1916, by 214,810 tons, notwithstanding that the production was interfered with to a considerable extent by labor troubles and lack of proper railway facilities in certain districts.

A larger portion of the production was sold for consumption in the province of Manitoba, than in previous years. There is still, however, a considerable amount of coal being imported from the United States for consumption in the provinces of Manitoba and Saskatchewan.

Twenty-four fatal and one hundred and one non-fatal accidents occurred during the year. Every precaution is being taken to guard against accidents and to prevent as much as possible disasters causing loss of life.

There are now in operation in the Province, three mine rescue cars and six stations. Work in connection with mine rescue and first aid is progressing satisfactorily, notwithstanding the fact that a large number of men have left the mines and enlisted for overseas service.

Full particulars will be found in the report of the Chief Inspector of Mines.

In the Steam Boilers Branch, the work was satisfactorily carried on. It is pleasing to again be able to report that no loss of life or even serious personal injury has occurred to anyone on account of explosion of a boiler, and the record of the Province in this regard still stands without a blemish. The report of the Chief Boiler Inspector gives full details of the work of the branch.

The reports of the Accountant's branch and Correspondence branch show the extent of the work carried on by them.

During the past year two men, who enlisted for overseas service, while employed with this Department, Lieut. H. O. Ross and Pte. G. S. Batters, have given their lives in France; good men whom we could ill afford to lose and who will continue to live in the memories of their fellow employees.

The following list gives the names of employees who have enlisted and is our Roll of Honour:—

Allan, Adam.
Armstrong, R.
Baird, Harry.
Batters, G. S. (killed in action).
Blakey, R. P. (discharged and returned to the service).
Brown, P. McL.
Calder, H. J.
Cawsey, J. S.
Coulson, R.
Craig, Tom.
Cross, Geo.
Dowe, W.
Duncan, W.
Duggan, John
Fago, Joseph.
Fraser, James.
Garvin, C. O.
Girvan, J.
Gray, Thomas.
Hollingsworth, E.
Jones, Caleb.
Jones, J. E.
Kinsman, J.
Laidlaw, James.
Leighton, A. F.
Lunn, H. A.
Markes, A. E.
McGee, W.
McKay, Hugh (wounded and discharged).
McLean, N.
McNicol, D. J. (wounded).
Munro, W.
Napper, T.
Pierce, J. S.
Richardson, J.
Robertson, E. D.

Ross, H. O. (killed in action).
Ross, J.
Seward, A. E.
Solway, W. C.
Stewart, A. G.
Todd, R.
Turton, W. H. (wounded, discharged and returned to service).
Urquhart, D.
Watson, James.
Williams, G.
Winters, J.
Woods, S. B.

Respectfully submitted,

L. C. CHARLESWORTH,

Deputy Minister.

HIGHWAYS BRANCH

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton.

SIR,—I have the honour to submit herewith a report of the work performed by the Highways Branch of the Department of Public Works during the year ending December 31st, 1917.

The number of bridges dealt with during the year was 536, of these 328 were construction and 208 were repairs. It was not deemed advisable to undertake the construction of any steel bridges, owing to the increased cost of steel caused by the present war. The construction of a number of large bridges, however, was undertaken, which consisted of timber Howe truss structures. Owing to the shortage of skilled labour for bridge work, this work was hampered to a great extent, and a number of the bridges we anticipated finishing during 1917 were not finished on this account as soon as it was expected.

The construction of a steel bridge, consisting of one 125 foot steel span on pile abutments, over the Milk river, south of Foremost, for which the material was ordered in 1916, was completed and open for traffic in the early part of the year 1917.

The construction of one of a single 100 foot steel span on concrete abutments over the Belly River, on the trail between Cardston and Hillspring, for which material was ordered in 1916, was completed and opened for traffic early in the year 1917.

The construction of a steel bridge, consisting of a single span of 100 feet, over the south fork of the Milk River, for which material was ordered in 1916, was completed and opened for traffic early in the year 1917.

The construction of a Howe truss timber bridge over the Red Deer river at Empress was completed and the bridge opened for traffic in December, 1917. This new bridge consists of two spans of 100 feet each, two spans of 107 feet each and two spans 134 feet each on pile piers.

The construction of a bridge over the Battle river, south of Galahad, was completed and the bridge opened for traffic in November, 1917. This bridge consists of one 100 foot timber truss and one 20 foot span on the north end, on a pile, pier and abutments.

A single 80 foot timber truss on pile abutments over the Knee Hill Creek at Grainger was completed and the bridge opened for traffic in September, 1917.

A single 80 foot timber truss on pile abutments over the Knee Hill Creek at Carbon, was completed and opened for traffic in October, 1917.

A single 80 foot timber truss on pile abutments over the Sturgeon river, southeast of Battenberg was completed and opened for traffic in December, 1917.

The construction was started of a bridge over the Bow river, south of Cluny, in September, 1917. This bridge is to consist of three 135 foot timber trusses on pile piers and abutments, with three 22 foot pile bent spans over a back water on the south side of the river. It was not possible to complete this bridge as was expected, owing to the delay in obtaining material from the Coast for this structure. Owing to the demand for coast material for ship building purposes, we had great difficulty in obtaining a mill, who would agree to supply the material. The delivery of this material was, therefore, delayed many months longer than expected.

During the year, material was ordered and delivered for the construction of a bridge over the Red Deer river, north of Duchess. This bridge to consist of five 100 foot timber trusses on pile, piers and abutments. The construction of this bridge will commence early in the year 1918.

Material was also ordered for a bridge to be constructed over the Oldman river, north of Maunsel. This bridge to consist of two 110 foot timber trusses. The construction of this bridge will commence early in the year 1918.

The construction and maintenance of roads was carried out along the same general lines as during the previous years. The greatest difficulty encountered was obtaining men and teams at a time when the work could be done to the best advantage, and in fact the work was practically suspended during harvesting, to allow the men to work with the farmers.

One important piece of highway was opened for traffic, that is, a road around the south side of Crow's Nest Lake. This connects with the B. C. highway and will eventually no doubt form a portion of an inter-provincial highway from coast to coast.

In connection with ferry operation, six new ferries were installed, two of which were not operated during the year, but will be ready for operation next spring. It was also necessary to construct eight new scows to replace those unfit for use. The total number of ferries operated by the Department during the year 1917 was 72. In addition to these, there was one ferry operated locally.

A full list of all the work undertaken by the Highways Branch is appended hereto.

Your obedient servant,

J. D. ROBERTSON,

Engineer of Highways.

Edmonton, Alta., March 9th, 1918.

BRIDGES CONSTRUCTED OR RE-CONSTRUCTED IN 1917

STREAM	LOCATION	SIZE AND CLASS OF BRIDGE
Atim Creek	19-53-26-4	Four 20 ft. spans on piles
Baptiste Creek	W. 30-66-23-4	One 50 ft. span on piles
Berry Creek	3/34-32/33-12-4	One 20 ft. span on piles
Belly River	S. E. 10-4-27-4	One 100 ft. and one 16 ft. steel span.
Beaver Dam Creek	7/8-28-3-5	One 18 ft. span on piles.
Blois Coulee	16/17-30-26-4	One 20 ft. span on piles
Blackmud Creek	29/51-24-4	One 50 ft. timber truss.
Branch of Woolf Creek	12-41-27-4	One 16 ft. span on piles.
Blueberry Creek	23/24-40-5-5	One 16 ft. span on piles.
Blindman River	7/44-1-5	Six 20 ft. spans on piles.
Blindman River	28-44-1-5	Three 20 ft. spans on piles.
Blindman River	31/32-43-2-5	Three 20 ft. spans on piles
Bear Creek	33/34-71-6-6	Three 18 ft. spans on piles
Big Knife Creek	7/18-40-17-4	Two 18 ft. spans on piles.
Birch Creek	20-21-50-9-4	One 18 ft. pile bents.
Birch Creek	19/20-50-9-4	One 16 ft. span on piles.
Beaver Hill Creek	5/6-56-19-4	Three 20 ft. spans on piles.
Battle River	20/29-44-33-4	One 20 ft. extension.
Battle River	36/1-44/45-23-4	One 80 ft. steel span, two 20 ft. spans.
Battle River	33/34-44-23-4	One 80 ft. steel span.
Belly River	6-5-26-4	Bank protection work.
Bull Horn Coulee	34-2-27-4	One 16 ft. span on piles.
Benjamin Creek	10-81-19-5	Two 24 ft. spans on piles.
Battle River	22-40-14-4	One 100 ft. Howe truss.
Beaver Creek	10/11-56-20-4	One 20 ft. span on piles.
Creek	E. 20-25-8-4	One 18 ft., One 20 ft. spans on piles.
Creek	E. 17-25-8-4	One 16 ft. mud sills.
Creek	Bet. 8/17-27-10-4	One 16 ft. mud sills.
Creek	E. 24-27-10-4	12 ft. frame bent.
Creek	Bet. 11/14-26-10-4	12 ft. frame bent.
Creek	Bet. 8/17-26-10-4	12 ft. frame bent.
Creek	17-66-15-4	12 ft. frame bent.
Creek	4/5-61-17-4	Log bridge.
Creek	W. 7-69-17-4	Log bridge.
Creek	S. 26-19-20-4	One 30 ft. x 13.
Creek	32/33-19-20-4	One 16 ft. frame bent.
Creek	30/31-70-10-6	One 14 ft. span on piles.
Creek	1/2-60-3-5	One 27 ft. bridge.
Casto Creek	35/36-38-13-4	One 20 ft. span.
Creek	12/13-38-13-4	Two 16 ft. spans on piles.
Creek	15/38-13-4	Two 12 ft. spans on piles.
Creek	22/23-5-21-4	One 16 ft. frame.
Creek	N. W. 12-3-28-4	One 20 ft. span on piles.
Creek	26/27-5-21-4	One 16 ft. span on piles.
Creek	13-9-28-4	One 20 ft. span on piles.
Creek	15/16-28-1-5	One 16 ft. span on piles.
Creek	17/18-28-3-5	One 20 ft. span on piles.
Creek	7-28-3-5	One 16 ft. span on piles.
Coulee	4/5-28-1-5	One 18 ft. span on piles.
Creek	16-28-3-5	Two 18 ft. pile spans.
Creek	21/22-28-3-5	One 18 ft. span on piles.
Coulee	4/5-28-1-5	Two 20 ft. spans on piles.
Creek	26-50-20-4	Two 20 ft. spans on piles.
Creek	26-50-20-4	One 14 ft. span on piles.
Creek	20/21-47-20-4	One 14 ft. span on piles.
Creek	3-49-21-4	One 16 ft. span on piles.
Creek	14-48-21-4	One 14 ft. span on piles.
Creek	36-47-21-4	One 12 ft. span on pile bents.
		One 12 ft. span on pile bents.

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STREAM	LOCATION	SIZE AND CLASS OF BRIDGE
Creek	9-46-18-4	One 12 ft. span on pile bents.
Creek	20-46-18-4	One 12 ft. span on pile bents.
Creek	15-46-21-4	One 14 ft. span on piles.
Creek	32-46-18-4	One 12 ft. span on pile bents.
Creek	6-46-18-4	One 12 ft. span on pile bents.
Creek	35-46-19-4	One 12 ft. span on pile bents.
Creek	35-43-19-4	One 12 ft. span on pile bents.
Creek	36-43-19-4	One 12 ft. span on piles.
Creek	23/26-45-21-4	One 12 ft. span on piles.
Creek	13/14-43-20-4	One 10 ft. span on piles.
Creek	5-42-21-4	One 12 ft. span on piles.
Creek	36-46-19-4	One 14 ft. span on piles.
Creek	10/15-30-27-4	One 18 ft. span on piles.
Creek	32/33-30-28-4	One 18 ft. span on piles.
Creek	N. 36, E. 35-29-29-4	One 20 ft. span on piles.
Creek	24-29-29-4	One 20 ft. span on piles.
Creek	9/10-57-14-5	One 20 ft. log span.
Carrot Creek	35-54-14-5	One 50 ft., Two 20 ft. truss on piles.
Creek	5-55-14-5	One 30 ft. and Three 16 ft. spans on crigs.
Creek	30-74-17-5	Two 18 ft. spans on piles.
Creek	36-74-16-5	Three 20 ft. spans on piles.
Creek	6-32-11-4	One 18 ft. span on piles.
Coulee	11/14-19-1-5	Seven 16 ft. spans on piles.
Creek	10/11-35-1-5	One 16 ft. span on piles.
Creek	22/23-36-25-4	One 20 ft. span on piles.
Creek	30-39-23-4	One 16 ft. span on piles.
Creek	35/36-40-24-4	One 18 ft. frame bent.
Creek	4/5-41-25-4	One 16 ft. span on piles.
Creek	10/11-41-25-4	One 16 ft. span on piles.
Creek	2/11-41-27-4	One 14 ft. span on cribs.
Creek	20-40-27-4	One 16 ft. span on piles.
Creek	15-40-27-4	One 16 ft. span on piles.
Creek	1/2-40-5-5	One 16 ft. span on piles.
Creek	5-40-4-5	One 16 ft. span on piles.
Creek	7/18-40-4-5	One 16 ft. span on piles.
Creek	26-40-5-5	One 16 ft. span on piles.
Creek	29/30-40-3-4	Two 16 ft. spans on piles.
Creek	29-48-3-5	Two 18 ft. spans on piles.
Creek	26/27-48-3-5	One 20 ft. span on piles.
Creek	30-48-3-5	One 18 ft. span on piles.
Creek	10-49-3-5	Three 18 ft. spans on piles.
Creek	28-50-26-4	One 18 ft. span on piles.
Creek	28-50-26-4	One 18 ft. span on piles.
Creek	26/27-48-3-5	One 20 ft. span on piles.
Creek	23-48-1-5	Two 18 ft. spans on piles.
Creek	30-49-25-4	One 20 ft. span on piles.
Conjuring Creek	24/25-50-27-4	Two 20 ft. spans on piles.
Creek	2/3-49-26-4	One 20 ft. span on piles.
Creek	29/32-54-1-5	Two 16 ft. spans on piles.
Creek	36-55-2-5	One 16 ft. span on piles.
Creek	35/36-54-2-5	One 16 ft. span on piles.
Creek	13/14-55-2-5	One 18 ft. span on piles.
Creek	26-54-2-5	One 16 ft. span on piles.
Creek	18-55-1-5	One 16 ft. span on piles.
Creek	23/24-59-12-5	Two 22 ft. spans on piles.
Creek	4-1-2-4	One 12 ft. frame bent.
Creek	27-1-2-4	One 12 ft. frame bent.
Creek	10-10-2-4	One 16 ft. log bent.
Creek	4-10-2-4	One 16 ft. log bent.
Creek	10/11-33-6-5	One 20 ft. span on piles.
Creek	5/6-34-2-5	One 20 ft. span on piles.
Creek	15/16-33-23-4	One 20 ft. span on piles.
Creek	22/27-33-24-4	One 16 ft. span on piles.
Coulee	20/21-34-4-5	One 16 ft. span.

STREAM	LOCATION	SIZE AND CLASS OF BRIDGE
Creek	2-8-1-5	Three 16 ft. spans on piles.
Creek	2-8-1-5	Three 16 ft. spans on piles.
Creek	7/18-44-25-4	One 16 ft. span on piles.
Creek	26-42-27-4	One 16 ft. span on piles.
Creek	27/28-44-3-5	One 20 ft. span on piles.
Creek	3/4-44-3-5	One 20 ft., Two 12 ft. spans on piles.
Creek	10-42-2-5	One 16 ft. span on piles.
Creek	28-44-1-5	One 16 ft. span on piles.
Creek	14-44-1-5	One 12 ft. span on piles.
Creek	23/26-43-1-5	One 12 ft. span on piles.
Creek	18-44-3-5	One 20 ft., Two 12 ft. spans on piles.
Creek	17-60-1-5	Two 16 ft. spans on piles.
Creek	34-58-1-5	One 16 ft. span on piles.
Creek	8-60-1-5	One 20 ft. span.
Creek	21/28-58-26-4	One 16 ft. span on piles.
Creek	35-73-5-6	One 18 ft. span on piles.
Creek	31-73-7-6	Two 16 ft. spans on piles.
Creek	7/18-73-10-6	Three 16 ft. spans on piles.
Creek	2-74-6-6	One 18 ft. crib abutment.
Creek	22/27-73-11-6	One 20 ft. span.
Creek	22-14-3-4	One 16 ft. span on piles.
Creek	21-14-3-5	One 16 ft. span on piles.
Creek	15-14-6-4	One 16 ft. span on piles.
Crow's Nest River	9-8-5-5	Five 20 ft. spans on pile bents
Creek	7-8-5-5	Three 22 ft. spans on piles.
Connelly Creek	35-7-2-5	One 20 ft. frame bent.
Creek	12-39-3-5	One 14 ft. pile span.
Creek	9/10-39-3-5	One 16 ft. span on piles.
Creek	33-38-7-5	One 16 ft. frame bent.
Creek	28-38-7-5	One 16 ft. span on piles.
Creek	28-38-7-5	Two 16 ft. spans on piles.
Creek	21-38-7-5	Two 16 ft. spans on piles.
Creek	8-38-7-5	One 16 ft. span on piles.
Creek	5-38-7-5	One 16 ft. span on piles.
Creek	21/28-37-26-4	One 16 ft. pile bent.
Creek	1/2-38-26-4	One 16 ft. pile bents.
Creek	16/17-38-7-5	One 16 ft. span on piles.
Creek	28-61-8-4	Two 16 ft. spans on piles.
Creek	1-55-1-4	One 16 ft. span on piles.
Creek	9-36-17-4	One 16 ft. span on piles.
Creek	20-38-17-4	One 16 ft. span on piles.
Creek	12/13-36-16-4	One 20 ft. span on piles.
Creek	13/14-36-16-4	One 20 ft. span on piles.
Creek	5/6-39-16-4	One 16 ft. span on piles.
Creek	30-39-16-4	One 16 ft. span on piles.
Creek	2-45-13-4	Two 20 ft. spans on piles.
Creek	17-45-13-4	Three 20 ft. spans on piles.
Creek	18/19-46-13-4	Two 20 ft. spans on piles.
Creek	3/4-59-23-4	Two 18 ft and One 20 ft spans on piles.
Creek	24/25-60-18-4	Two 18 ft. spans on piles.
Creek	3/4-55-26-4	One 12 ft. span on piles.
Creek	9/10-55-26-4	One 16 ft. span on piles.
Creek	2/3-55-26-4	One 18 ft. span on piles.
Creek	10-55-26-4	One 16 ft. span on piles.
Creek	10/11-9-19-4	Two 16 ft. spans on piles.
Creek	32-53-7-4	One 20 ft. span on mud sills.
Creek	21/28-54-17-5	Two 27 ft. spans on cribs.
Creek	31/6-53/54-14-4	Two 20 ft. spans on piles.
Creek	18-53-17-4	Three 20 ft. spans on piles.
Creek	31/32-54-18-4	Two 20 ft. spans on piles.
Creek	18-55-17-4	Two 16 ft. spans on piles.
Creek	24-1-13-4	One 20 ft. span on piles.
Creek	18-5-12-4	Two 20 ft. spans on piles.

DEPARTMENT OF PUBLIC WORKS

STREAM	LOCATION	SIZE AND CLASS OF BRIDGE
Creek	7/18-1-13-4	One 20 ft. span on piles.
Creek	7-1-13-4	One 16 ft. span on piles.
Creek	1-6-17-4	One 16 ft. span on piles.
Creek	10/11-5-14-4	Two 20 ft. spans on piles.
Creek	13-55-14-4	One 16 ft. span on piles.
Creek	22/27-59-17-4	One 16 ft. span on piles.
Creek	10/11-46-26-4	One 16 ft. frame.
Creek	14-47-25-4	One 18 ft. span on piles.
Creek	12-46-26-4	One 18 ft. span on piles.
Creek	12-46-22-4	One 20 ft. span on piles.
Creek	28/29-66-22-4	72 ft. x 18 ft. on piles.
Creek	2/3-61-3-5	One 16 ft. span on piles.
Creek	10/11-61-3-5	One 16 ft. span on piles.
Creek	28-61-5-5	One 16 ft. span on piles.
Creek	27-60-4-5	One 16 ft. span on cribs.
Creek	23-33-11-4	One 20 ft. span on piles.
Creek	25/26-33-11-4	One 16 ft. frame bent.
Creek	11/12-2-25-4	One 14 ft. span on piles.
Creek	35-40-20-4	One 12 ft. span on piles.
Creek	7/18-27-26-4	Two 20 ft. spans on piles.
Creek	26-32-12-4	One 20 ft. span on piles.
Creek	6-50-3-5	One 20 ft. span on piles.
Creek	2-50-4-5	One 20 ft. span on piles.
Creek	3-50-4-5	One 20 ft. span on piles.
Creek	8/17-33-6-5	One 45 ft. span on piles.
Creek	3-33-5-5	Bank protection work.
Coulee	3/4-7-1-5	Two 20 ft. spans on piles.
Creek	24-43-1-5	One 21 ft. span on piles.
Creek	12-44-25-4	One 16 ft. span on piles.
Creek	31-13-3-4	One 16 ft. span on piles.
Creek	2-60-8-4	Two 20 ft. spans on piles.
Creek	22-52-25-4	One 20 ft. span on piles.
Creek	22/27-65-21-4	One 20 ft. span on piles.
Creek	26/27-65-21-4	One 20 ft. span on piles.
Creek	5-1-13-4	One 16 ft. span on piles.
Creek	32-58-15-5	One 16 ft. span on piles.
Deep Creek	32-74-16-5	One 40 ft. span.
Deep Creek	25-71-5-6	Three 18 ft. spans on piles.
Dry Lakes	22-33-3-4	Two 20 ft. spans on piles.
Eagle Creek	9/16-33-4-5	One 20 ft. span on piles.
Eagle Creek	8/9-33-4-5	One 20 ft. span on piles.
East Branch of Old Man River	11/12-44-3-5	One 20 ft., Two 14 ft. spans on piles.
Elbow River	12-23-5-5	Two 60 ft. trusses.
French Creek	16-64-1-5	One 60 ft. truss on cribs.
Five Mile Creek	26-71-5-6	One 20 ft. span on piles.
Fish Creek	36-2-27-4	One 16 ft. span on piles.
Frog Creek	22/23-55-2-5	Two 18 ft. spans on piles.
Gull Creek	2/3-109-13-5	Log bridge.
Ghostpine Creek	32/33-33-23-4	Two 20 ft. spans on piles.
Ghostpine Creek	21/28-33-23-4	Two 20 ft. spans on piles.
Glacier Creek	6-8-5-5	Two 18 ft. spans on cribs.
Grizzly Bear Coulee	22/23-49-6-4	One 16 ft. span on piles.
Haynes Creek	2/3, 10/11-39-24-4	Two 20 ft. spans on piles.
Haynes Creek	1/2-39-24-4	One 18 ft. span on piles.
Haynes Creek	9/10-39-24-4	Two 16 ft., One 18 ft. frame bents.
Irish Creek	S. 6-54-3-4	Three 20 ft. pile bents.
Jumping Pound Creek	4-26-4-5	One 100 ft. & Two 20 ft. spans
January Creek	20-54-14-5	One 30 ft., Two 18 ft. trusses on piles.
James River	23/24-34-6-5	One 300 ft. span (foot bridge)
Knee Hill Creek	15-29-23-4	One 18 ft. truss on piles.
Knee Hill Creek	14/15-29-23-4	One 60 ft. and One 20 ft. truss on piles.

STREAM	LOCATION	SIZE AND CLASS OF BRIDGE
Knee Hill Creek	4/33-31/32-26-4	One 60 ft. truss.
Kipp Coulee	4/5-6-15-4	Two 20 ft. spans on piles.
Kipp Coulee	15/16-5-12-4	Two 20 ft. spans on piles.
Kipp Coulee	13-6-17-4	Two 20 ft. spans on piles.
Knee Hill Creek	13-29-23-4	One 20 ft. span.
Lee's Creek	12-2-27-4	One 20 ft. span on piles.
Lone Pine Creek	3/33-30/31-26-4	Three 20 ft. spans on piles.
Lone Pine Creek	23/24-30-26-4	Three 20 ft. spans on piles.
Lobstick River	13-54-13-5	One 40 ft. and Two 20 ft. pile spans.
Lobstick River	25-53-8-5	Two 16 ft., One 30 ft. and one 20 ft. spans on piles.
Limestone Lake	4/5-57-17-4	One 18 ft. span on piles.
Matzan Creek	5-22-14-4	Two 20 ft. spans on piles.
Mill Creek	12-52-24-4	One 20 ft. pile span.
Mill Creek	22/23-52-24-4	One 20 ft. pile span.
Mill Creek	14-52-24-4	One 20 ft. pile span.
Mill Creek	5/6-52-23-4	One 20 ft. pile span.
Milk River	29-2-10-4	Two 20 ft. spans on piles.
Milk River	29-2-10-4	One 125 ft. steel, two 20 ft. wood spans on pile abut- ments and bents.
Mosquito Creek	14/15-16-28-4	One 60 ft. T. T., Two 20 ft. spans.
Medicine River	19/24-38-2/3-5	Two 50 frame trusses.
Nelson Creek	21-38-11-4	Two 16 ft. spans on piles.
North Fork Old Man River	8/9-16/17-9-1-5	200 ft. steel span on concrete
Nose Creek	22/27-28-1-5	One 20 ft. span on piles.
North Paddle River	35/36-57-9-5	Two 20 ft. spans on piles.
Pine Creek	W. 31-66-19-4	One 40 ft. span on piles.
Pailby Creek	33-40-24-4	One 18 ft. span on piles.
Paddle River	25-56-9-5	Three 18 ft. spans on piles.
Pine Creek	6-66-20-4	One frame bent.
Peavine Creek	22-77-21-5	One 20 ft. span on piles.
Peavine Creek	15-77-21-5	One 20 ft. span on piles.
Peavine Creek	15-77-21-5	One 20 ft. span on piles.
Paddle River	27/28-56-9-5	Two 18 ft. spans on piles.
Pailby Creek	29-50-23-4	Two 14 ft. spans on piles.
Paddle River	15-59-3-5	One 60 ft. truss, 4 20 ft. bents.
Paddle River	4/9-60-1-5	One 60 ft. span, two 135 ft. steel spans on piles.
Pailby Creek	10/11-41-25-4	One 16 ft. span on piles.
Paintearth Creek	8-39-15-4	One 18 ft. span on piles.
Red Deer River	13/14-23-1-4	Two 134 ft, two 107 ft & two 100 ft. Howe trusses on piles.
Ravine Creek	22/23-51-25-4	One 20 ft. span on piles.
Rosebud Creek	14/15-27-24-4	Three 20 ft. spans on piles.
Rosebud River	20/21-27-23-4	Three 20 ft. spans on piles.
Rainy Creek	7/18-40-1-5	One 16 ft. span on piles.
Rainy Creek	3/4-41-2-5	Two 16 ft. spans on piles.
Ravine	35-20-1-5	Two 20 ft. spans on piles.
Redwater River	21/28-51-21-4	Three 20 ft. spans on piles.
Red Deer River	34-32-5-5	Bank protection work.
Ravine at Bald Hill	2-69-23-4	40 ft. x 16 ft. on piles.
Sounding Creek	19/20-30-8-4	One 16 ft. mud sills.
Snake Creek	14/22-2-25-4	Two 20 ft. spans on piles.
Stony Creek	35-29-5-5	One 20 ft. span bridge.
Stony Creek	31/32-29-1-5	Three 20 ft. spans on piles.
Stony Creek	4/5-51-24-4	One 20 ft. span on piles.
Sturgeon River	6/5-55-1-5	Two 18 ft spans on piles.
Sevenpersons Creek	12/13-10-7-4	Two 16 ft. spans on piles.
South Fork, Fish Creek	3/4-22-3-5	Three 20 ft. spans on piles.
Sturgeon River	12/13-56-23-4	One 80 ft. Howe truss on piles.
South Fork, Milk River	6-2-18-4	Three 20 ft. spans on piles.

STREAM	LOCATION	SIZE AND CLASS OF BRIDGE
Smoky Creek -----	18-59-17-4 -----	One 18 ft. span on piles.
Smoky Creek -----	18-59-17-4 -----	One 18 ft. span on piles.
Smoky Creek -----	7/8-59-17-4 -----	One 18 ft. span on piles.
Sounding Creek -----	27/28-30-9-4 -----	One 18 ft. span on piles.
Swan River -----	73-10-5 -----	One 125 ft. steel & three 20 ft. spans on piles.
Six Mile Coulee -----	Lethbridge -----	Trestle.
Sturgeon River -----	6-55-1-5 -----	Three 18 ft. spans on piles.
Sheep Creek -----	at Okotoks -----	Bank protection work.
Spirit River -----	bet. R. L. 15/16-78-5-6 -----	Four 20 ft. spans on piles.
Sucker Creek -----	23-58-20-4 -----	Three 20 ft. spans on piles, One 40 ft. Trimmer truss.
Three Hills Creek -----	9/16-32-24-4 -----	One 18 ft. pile bents.
Two Creeks -----	20/21-55-19-4 -----	One 20 ft. span on piles.
Tall Creek -----	23/26-39-22-4 -----	Three 20 ft. spans on piles.
Vermilion River -----	11-54-3-4 -----	One 18 ft. mud still.
Vermilion River -----	31-51-9-4 -----	Two 20 ft., one 15 ft. spans on piles.
Vermilion River -----	31-53-10-4 -----	Three 20 ft. spans on piles.
Vermilion River -----	11/12-54-14-4 -----	Three 20 ft. spans on piles.
Vermilion River -----	31/32-54-12-4 -----	Eight 20 ft. spans on piles.
Vermilion River -----	26/27-54-12-4 -----	Three 20 ft. spans on piles.
Vermilion River -----	1-27-21-4 -----	One 50 ft. truss and three 20 ft. spans on piles.
Wah-sah-at-anon Ck. -----	33-58-19-4 -----	Three 20 ft. spans on piles.
Whiteearth Creek -----	31/36-59-16/17-4 -----	Four 42 ft. spans on piles.
Wabash Creek -----	26/27-38-14-4 -----	Two 16 ft. spans on piles.
Waskasoo Creek -----	6-38-27-4 -----	One 20 ft. span on piles.
Waskasoo Creek -----	6-38-27-4 -----	Two 16 ft. spans on piles.
West Branch of Blindman River -----	10/11-44-3-5 -----	One 20, two 14 ft. spans on piles.
Whitecourt River -----	35-59-12-5 -----	Four 20 ft. spans on piles.
Whitemud Creek -----	31-49-25-4 -----	Two 20 ft. spans on piles.
Yelling Creek -----	8-60-8-4 -----	Two 16 ft. spans on piles.

MAINTENANCE OF BRIDGES, 1917.

Battle River	E. 12-45-1-4
Battle River	35-45-3-4
Bow River	3-21-19-4
Belly River	5-5-26-4
Big Hill Creek	N. E. 11-26-4-5
Bow River	34/35-25-4-5
Battle River	36-40-16-4
Battle River	33-43-18-4
Battle River	39/15-46-21-4
Black Mud Creek	S. E. 29-51-24-4
Bench Creek	N. E. 31-53-16-5
Blackfalds Lake (outlet)	17-39-26-4
Blindman River	20/29-39-28-4
Blindman River	10/15-40-1-5
Barker Draw	28/33-49-1-5
Bullhead Creek	19-11-5-4
Bullhead Creek	17-11-5-4
Bullhead Creek	20/29-10-7-4
Bullhead Creek	19-11-5-4
Bullhead Creek	23/26-10-7-4
Bear Creek	8/17-43-27-4
Blindman River	6/1-44-2/3-4
Blindman River	N. 24-43-2-5
Bear Creek	23-71-6-6
Battle River	31-42-9-4
Battle Creek	N. W. 17-44-8-4
Birch Creek	2/35-52/53-7-4
Battle River at Gould's Crossing	N. Boundary 31-45-22-4
Battle River	S. E. 25-45-23-4
Battle River	Bet. 21-45-28-4 and 24-45-1-5
Battle River	Bet. 33/34-45-1-5
Battle River	31-45-22-4
Branch of Little Stone Creek	12/13-46-27-4
Bow River south of Gleichen	Gleichen
Creek	10/15-53-10-4
Creek	Bet. 8/9-35-7-4
Creek	4/5-3-26-4
Creek	Bet 7/12-5-20/21-4
Coulee	N. of N. E. $\frac{1}{4}$ of 12-5-21-4
Creek	Bet. 19/30-5-19-4
Creek	25-13-29-4
Coulee	34-45-21-4
Creek	Bet. N. E. 19 and S. E. 30-52-22-4
Creek	12-51-22-4
Creek	22/23-51-25-4
Creek	23/26-80-19-4
Creek	24/25-74-17-5
Creek	34/35-80-17-5
Creek	19/20-30-16-4
Creek	5/32-29/30-18-4
Creek	18/36-1-5
Creek	S. E. 21-35-3-5
Creek	8/17-36-1-5
Creek	32-40-26-4
Creek	N. 7-41-26-4
Creek	S. E. $\frac{1}{4}$ 31-38-25-4
Creek	32/48-3-5
Creek	10/11-50-24-4
Creek	23-49-24-4
Conjuring Creek	on Line 49/50-27-4
Creek	30-49-1-5
Creek	S. 4-49-2-5
Creek	9/10-50-23-4

Creek	32/33-50-25-4
Creek	W. 30-49-25-4
Creek	24/25-49-26-4
Creek	34/35-54-7-5
Creek	32-6-25-4
Coulee	15/16-10-24-4
Creek	19/20-16-28-4
Creek	18/19-16-28-4
Creek	3/34-32/33-28-4
Creek	2/34-42-43-25-4
Clearwater	32-27-6-5
Creek	28/29-13-2-4
Creek	S. W. 32-35-20-4
Creek	9/16-53-2-5
Creek	18-56-21-4
Chin Coulee	S. W. of 1. and S. W. of 6-10-18/19-4
Chin Coulee	3/34-9/10-18-4
Chin Coulee	S. W. of 25-9-19-4
Chin Coulee	32/4-6/7-19-4
Chin Coulee	5/6-10-18-4
Creek	33/34-50-17-4
Creek	4/5-51-12-4
Creek	20-52-14-4
Creek	7/18-55-18-4
Creek	5/6-56-19-4
Creek	32/33-56-16-4
Creek	6/36-54/55-21/22-4
Creek	1/36-55/56-19-4
Coulee	9-4-16-4
Creek	35/36-5-17-4
Creek	W. 2-46-26-4
Creek	21-47-24-4
Creek	14/15-46-27-4
Creek	S. E. 28-46-2-5
Creek	S. E. 13-46-2-5
Creek	N. W. 14-46-2-5
Creek	East 8-47-23-5
Creek	S. W. 13-46-2-5
Creek	29-46-2-5
Deep Creek	25/26-74-16/17-5
Elbow River (over old channel)	4/5-24-2-5
Fish Creek	4-23-1-5
Horse Creek	5-27-4-5
Heath River	24-96-18-5
Hay Coulee	3/4-8-26-4
Iron Creek	17-43-9-4
Iron Creek	E. of 13-43-10-4
Jumping Pond Creek	4-26-4-5
Kootney River	29-6-29-4
Knotts Creek	8-82-23-5
Kipp Coulee	3/4-7-19-4
Knee Hill Creek	21/28-29-24-4
Lees Creek	23-3-25-4
Layton Coulee	13-3-26-4
Lone Pine Creek	8/12-31-26-27-4
Little Red Deer River	4/33-31/32-4-5
Lone Pine Creek	23/24-30-26-4
Lone Pine Creek	13-20-26-4
Lesser Slave Lake	7-73-5-5
Little Bow River	31-13-23-4
Limestone Creek	21/28-56-18-4
Little Stone Creek	10/15-46-27-4
Meeting Creek	Bet. 21/22-43-20-4
Mill Creek	7/12-52-23/24-4
Muskeg Creek	12-54-17-5
Moose River, east end Lesser Slave lake (on road)	
Menonites Spring	5-23-22-4
Manyberries Creek	19/24-5-5/6-4
Mosquito Creek	12/13-16-28-4

Mosquito Creek	21/22-16-28-4
Medicine River	7-38-2-5
Milk River	S. W. 3-2-12-4
North Fork Highwood River	16-18-2-5
Nanton Creek	7/18-16-28-4
North Heart River	20-81-19-5
Narrows Lesser Slave Lake	14-74-17-5
Oldman River	S. W. 17-7-28-4
Oldman River	12-10-17-4
Pine Creek	S. W. 4-67-19-4
Pine Creek	6-66-20-4
Pine Creek	26/27-66-20-4
Porcupine Hills Road	10-10/11-29-4
Prairie River	11-74-16-5
Paddle River	15-59-3-5
Pembina River	11-58-3-5
Pine Creek on Lac La Biche Trail	6-66-20-4
Pipestone Creek	N. W. 26-46-23-4
Pipestone Creek	S. W. 19-46-22-4
Pipestone Creek	E. Boundary of 12-47-24-4
Pipestone Creek	E. Boundary of 3/4-47-23-4
Pipestone Creek	E. Boundary of 2/3-47-23-4
Rosebud Creek	22/23-27-23-4
Rosebud Creek	23-27-26-4
Rosebud Creek	22/23-27-25-4
Red Deer River	at Drumheller
Red Deer River	36-28-4
Ravine River	N. W. 31-35-3-5
Ross Creek	31/6-9/10-2-4
Ravine	35-20-1-5
Ravine	34/35-38-27-4
Red Deer River	at Red Deer
Stony Creek	4-48-20-4
Spring Coulee	N. of W. W. 35-29-25-4
Stony Creek	4/5-51-24-4
Salt Creek	21-76-14-5
South Heart River	25-75-17-5
Sucker Creek	N. E. 26-40-28-4
Strawberry Creek	29-49-1-5
Sturgeon River at Grays	6-55-1-5
St. Marys River or Belly River	at Lethbridge
Seven Persons Creek	28/29-10-7-4
Sturgeon River	29-55-22-4
Saskatchewan River	Fort Saskatchewan
Sturgeon River	E. of 22-55-22-4
Sturgeon River	20/29-54-26-4
Spring Coulee	S. E. 5-56-20-4
Sandstone Coulee	8/17-1-12-4
Three Hill Creek	15-30-23-4
Three Hill Creek	12-31-26-4
Trail Creek	11/44-39-22-4
Tributary of Barlby Creek	35/36-39-23-4
Twelve Mile Coulee	29/30-10-21-4
Thompson's Crossing	N. E. 16-21-28-4
Three Hills Creek	31-32-24-4
Three Hills Creek	9/16-32-24-4
Todd Creek	31-7-1-5
Two Creeks	20-55-19-4
Tributary Parlbby Creek	35/36-39-23-4
Vermilion River	1/2-52-5-4
Vermilion River	16/17-52-3-4
Vermilion River	28/29-57-21-4
Vermilion River	W. of 10-51-9-4
Vermilion River	28/29-53-10-4
Vermilion River	6/1-51-7/8-4
Willow Creek	7-12-27-4
Willow Creek	6/36-10/11-26/27-4
West Prairie River	14-74-17-5
Wolf Creek	7/12-32-16/17-4

Wolf Creek	E. 12-41-27-4
Whitemud Creek	30/31-49-25-4
West fork of Seven Persons Creek	4/33-10-7-4
Wabash River	31/6-60/59-1-5
Willow River	24-9-26-4

ORDINARY ROADS, 1917.

East of 5 to 32-30-2-4. Improvement of road.
 North of 7 to 12-24-3-4. Improvement road allowance.
 S. E. 1-23-8-4 and N. W. 6-23-7-4. Grading road to ferry.
 West 5 to 32-30-3-4. Grading road.
 East 4 to 33-29/30-7-4. Improvement of road north of Chinook.
 North 19 to 24-30-9/10-4. Filling slough.
 From Islay South to Battle River. Improvement of road.
 Between 20/21-51-5-4. Grading road.
 Road Twp. 66 and 67-22-4. Draining lake.
 North Twp. 66-23-4. Corduroying.
 Between Secs. 8/9-68-24-4. Corduroying.
 West Secs. 3, 10, 15, 22, 27-66-19-4. Clearing and corduroying.
 South Secs. 1 to 5-66-22-4. Clearing and corduroying.
 From lots 1 to 9-67-24-4 and from lots 8 to 24-66-24-4. Ditching, grading culverts.
 East Secs. 5 to 32-67-21-4. Brushing and covering.
 West 15 to 22, north 7, 8, 9-66-23-4. Laying corduroy and covering.
 East 2 to 23-66-24-4. Clearing and cutting ditch.
 From Fort Vermilion West through Stony Point. Improvement of road.
 From Fort Vermilion south on west side of settlement. Improvement of road.
 From Fort Vermilion west, north side Peace River. Improvement of road.
 North Twp. 68, Rges. 24 and 25-4. Bridge over Long Lake Creek.
 East of 6/31-67-23-4 and east of 25/36-66-24-4 at $\frac{1}{2}$ mile. Ditching and grading.
 In 2, 3, 9, 10 -68-16-4. Brushing and clearing.
 South of Plamondonville 66/67-16-4. Corduroying.
 East of Sec. 5 and 8, south of Sec. 17/18-65-12-4. Opening road.
 South Sec. 13/14/15-65-13-4. Opening road.
 Between 21/28-61-9-4 west to between 23/26-61-10-4. Corduroying and ditching.
 Between south to 29/30-5/6-59-9-4. Corduroying and ditching.
 South 21/28-56-10-4. Clearing road.
 Between Twps. 55/56-12-4. Corduroying and clearing.
 West 23-60-9-4. Corduroying and ditching.
 West of 2-61-9-4. Corduroying and ditching.
 West of 31-61-9-4. Corduroying and ditching.
 Between Secs. 27/28, 33/34-65-15-4. Opening road.
 North 10/11-67-15-4. Corduroying.
 West 30, 31, N. $\frac{1}{2}$ 19-58-10-4. Corduroying.
 West Secs. 2 to 35-60-15-4. Brushing and laying corduroy.
 N. W. Sec. 24-61-9-4 Beaver River and in 29-62-8-4. Clearing road.
 South 14-61-9-4. Corduroying and brushing.
 West 2 to 35-61-11-4. Corduroying and brushing.
 East 6-59-11-4, east 26-58-12-4. Grading and grubbing.
 North of Smoky Lake east 28 to 33-59-17-4, east to 4 to 16-60-17-4. Draining slough.
 East of one to 25-62-11-4. Corduroying.
 Between 4/5, 8/9-61-17-4. Making bridge and fixing approaches.
 Between 27/34-67-16-4. Opening up road.
 13/14, 24/25-67-15-4. Opening up road.
 Between Twp. 64/65-13-4. Opening up road.
 Between 6/1-66-14/15-4. Opening and improving road.
 North 11-68-16-4. Improvement of road.
 North 66-14/15/16-4. Opening up correction line.
 North 7/8, 9/10-61-10-4. Hauling and laying corduroy.
 Between 5/6, 7/8, 17/18-61-10-4. Grading and corduroying.
 West 31-67-15-4, west 6-68-15-4. Opening up road.

West 16/21, 28/23-61-10-4. Corduroy and grade.
 Between 8/9-60-9-4. Corduroy and grade.
 Between 20/21, 28/29, 32/33-59-9-4. Clearing, ditching and corduroying.
 Between 4/5-60-17-4. Ditching and culverts.
 North 31 to 36-59-16-4. Brushing, clearing and grubbing.
 East $\frac{1}{2}$ between 12/13, 13/14, 23/24-60-10-4. Clearing, grubbing and culverts.
 West past or Sec. 8, west $\frac{1}{4}$ 20-60-17-4. Grade and culverts placed.
 Between 7/8-60-15-4. Grading and culverts.
 Between 5/6 to 21/22-59-16-4. Corduroy, grubbing and culverts.
 N. W. of 10, 15, 22-57-10-4 and west 25/35-57-10-4. Corduroy, grubbing and culverts.
 Road from Brooks to Gregory's Ford and Sec. 19/20, 21/22-13/14-4. Grading slough.
 Between 31/32-20-14-4. Grading slough.
 West 1-19-14-4. Improvement of road.
 North 19/24-19-20-4. Wheelscrapping and improving road.
 West 3 to 34-19-20-4. Building culverts.
 Between 10/15-19-20-4. Building culverts.
 Between Secs. 2/4, 13/14-18-18-4. Subway.
 West 15, 22, 27-25-2-5. Putting in culverts.
 North 25-3-5. Culverts and filling slough.
 Road on Old Mission Trail. Culverts and filling mud holes.
 Twp. 25 to 28, rges. 1, 2, 3-5. Repairing culverts.
 Between Secs. 25/26, 35/36-58-3-5. Laying brush corduroy.
 Bet. Secs. 11/14-60-3-5. Grubbing out willows.
 North 3/4-60-3-5. Culverts and clearing.
 North 25 to 30-70-11-6. Grubbing.
 Between 5/6, 7/8-60-3-5. Covering corduroy and brushing.
 In 34-60-3-5. Grubbing road.
 Trail from Holmes' Crossing to Cartwright's, 61-6 and 7-5. Grubbing and grading hill.
 Between north $\frac{1}{2}$ 9/10-62-6-5. Putting in culvert.
 Road from Steel Bridge over Belly River to Waterton Lakes, 3-29-4. Repair road to bridge.
 Between 3/4 to 33/34-3-24-4. Filling in mud holes and placing culverts.
 Sec. 9 Rge. 29/30-4 and in Sec. 9-1-5. Subway.
 East 24, 25, 36, north 13, 14, west of 2-11-14 Tp. 26-4-5. Improvement of road.
 Between Cochrane and Mitford through Grand Valley to Dog Pound. Improvement of road.
 Secs. 7 and 18-27-4-5. Culverts.
 South of Secs. 6 1, 2-29-3/4-5. Improvement of road.
 Secs. 32/5-28/29-4-5. Culverts.
 Secs. 9-16, 10/15, 28-3-5. Grading approaches.
 North of Sec. 25 to 30-28-3, 4, 5-5. Improvement of road allowance.
 Secs. 26/27-34/35-28-1-5. Filling and grading.
 South of 25 to 29, south and 25 and 30, 28-1-5. Filling and grading.
 East of 4 and 33-28-1-5. Culverts and filling in holes.
 Between 12 and 13-28-1-5 to bet. 7 and 18-28-2-5. Grading new road.
 Road allowance through Clayton's Coulee, Secs. 20 and 21-27-1-5. Filling and grading.
 West Twp. 25-5-5 along east side of Stony Indian Reserve through Secs. 5 and 7, 26-5-5. Improvement of road.
 N. W. of 23-28-2-5. Grading and filling.
 Bet. 9/10-25-4-5. Putting in culverts.
 East of 11 and 12, bet. 11/14, 10/15, 9/16, 8/17, 25-4-5. Putting in culverts.
 North of Twp. 24-4-5-5. Improvement of road allowance.
 West of Jumping Pond Bridge, bet. Twps. 25/26-4-5. Grading and culverts.
 Between 7/8-27-4-5. Improvement of road.
 West Secs. 18, 19-27-3-5. Repairs to culverts.
 East of Sec. 24-28-4-5. Improvement of road.
 From Cochrane up Horse Creek to the N. W. 8-27-4-5. Putting in culverts.
 West of 6-27-1-5. Improvement of road.
 Secs. 29, 31, 32-25-3-5. Improvement of road.
 Bet. Secs. 9/16, 12/15, 11/14, 12/13-26-3-5. Grading three sloughs.
 Bet. Secs. 33/34, 27/28, Twp. 24-4-5. Improvement of road.

Bet. 24/25, 23/26, 22/27, 21/28, 20/29, Tp. 27-2-5, north of Secs. 21 to 24-27-3-5. Improvement of road.

Road up Big Hill Creek, North of Cochrane Twp. 26-3/4, 5. Repairs to road up Big Hill Creek.

North of Twp. 25-3-5. Culverts and filling in slough.

Bet. 1 and 2-48-18-4. Brushing and grading mud holes.

West of White Fish through Forester Twp. 42-21-4. Repairing grade and filling holes.

Bet. 20/29-43-20-4. Digging ditch to slough.

In Twp. 50-20-4. Improvement of road.

East and west of Kingman, north of Secs. 7/9, Twp. 49, Rges. 18/19-4, north of Secs. 12 through 13 and 33, Twp. 49-20-4. Brushing and scraping road.

West of Secs. 16-48-21-4. Grading up Big slough.

West of Secs. 6/7-48-19-4. Clearing and brushing slough.

East of Camrose between Twps. 46/47-18/19-4. Grading up old grades.

North of Secs. 12 to 7, 48-20-4. Filling up holes and grade.

East of Secs. 4 to 33-47/48-20-4. Grading across big slough.

Through Secs. 13/14-46-19-4. Improvement of road.

West of Twp. 48-21-4. Covering brush and corduroy.

North of Secs. 35/36-43-19-4. Scraping and raising grade.

West of Sec. 4-45-16-4. Grading and brushing.

North of Secs. 32-44-17-4. Grading with big grader.

South of Secs. 28-44-19-4. Grading and fencing.

East of Sec. 3-43-20-4. Filling sloughs with brush and earth.

West of Secs. 14-43-19-4. Raising two old grades.

East of Sec. 25-42-20-4. Grading and levelling road.

West of Secs. 22, 37, 34-43-16-4. Grading up grades.

Bet. Secs. 21/22, 27/26-42-19-4. Improvement of road.

Bet. 1/2-43-20-4. Culverts.

Secs. 32-46-20-4. Raising grade.

North of Sec. 19-47-17-4 to north of 19-47-18-4. Improvement of road.

East of Secs. 5 to 32-48-18-4. Brushing slough.

Bet. Secs. 31/32-48-18-4. Improvement of road.

North of Sec. 8-48-18-4. Improvement of road.

West of Sec. 26/25, 47-18-4, west of Sec. 2, 11, 14-48-18-4, and north of 7-48-18-4. Improvement of road.

Bet. 1/36-42/43-4 and bet. 31/6-44/43-18-4. Grading up low places.

Bet. Secs. 5/6 to 31/32-29/30-2-5. Ditching and grading.

Bet. 17/18-31-28-4. Grading through slough.

Bet. Twps. 30/31-2-5. Grading brush and ditch.

Bet. Secs. 34/35-52-22-4. Opening road.

Twp. 52-22/23-4. Opening up range line.

Bet. Secs. 26/27-53-14-5. Clearing right-of-way.

Bet. 19, 20, 21-53-13-5. Cutting and hauling and laying corduroy.

North of Sec. 8-53-13-5. Corduroying.

West of Secs. 10, 15, 22-53-13-5. Improvement of road.

South and east of Thornton bet. Twps. 53/54-16-5, and 53-15-5. Improvement of road.

Tote road Wolf Creek to Carrot Creek east. Clearing and grading.

North and east of S. E. 36-53-16-5 and south of S. W. 31-53-15-5. Ditching, grubbing and clearing.

South of Secs. 28/29-54-17-5. Ditching and grading.

Bet. north half of Secs. 23/24-16-4. Corduroy, ditch and grade.

South of Sec. 1/6-56-15/16-5. Corduroy and brush.

North of Secs. 10/11-54-17-5. Ditching, clearing and grading.

North of Secs. 35-54-15-5. Clearing brush.

North of the south half and west of N. W. 27-54-15-5. Improvement of road.

West of 27 and 34, bet. 23-53-17-5. Grading and grubbing.

Bet. 5/6, 7/8 Twp. 54-17-5. Ditching and grading.

In Sec. 2-51-16-5. Clearing and ditching.

Bet. Secs. 10/11-53-15-5. Improvement of road.

Bet. Secs. 10/11-53-15-5. Improvement of road.

Bet. 15/16-53-15-5. Improvement of road.

West of Sec. 31-53-13-5. Improvement of road.

North of Sec. 31, east half of 32, 53-13-5. Grading one quarter mile.

Road north of Rocky Mountain Ferry in 39, 40, 41-7-5. Clearing and ditching.

Secs. 16 and east of 20/29-54-15-5. Ditching and covering brush.
 North of Sec. 25/26-53-14-5. Improvement of road.
 West of Sec. 8-53-13-5. Clearing half mile road.
 West of 9 Secs. 16 and 21-53-13-5. Corduroying brush.
 Bet. 22/23-54-16-5. Improvement of road.
 West of Secs. 1, 12, 13, 24-53-17-5. Clearing, grubbing and ditching.
 In the west half of Sec. 5, east of 7-54-15-5. Grading five big hills.
 North of Secs. 31 to 36-56-13-5 and north of 31 to 36-56-14-5. Building grade.
 West of Secs. 3, 10, 15-57-14-5. Clearing, grubbing and putting in culvert.
 Bet. 1/2-57-14-5. Improvement of road.
 Bet. 5/6-57-13-5. Ditching, grading and culvert.
 Bet. 32/33-53-17-5. Clearing and grubbing.
 Bet. 27/22-55-14-5. Clearing, corduroying and ditching.
 North of Sec. 19, 20, 21-39-7-5. Improvement of road.
 South of Sec. 30-56-13-5. Improvement of road.
 North of Sec. 8-57-13-5. Improvement of road.
 East of Sec. 25 and 36, Twp. 56-14-5 and east of 12 and 13-57-14-5. Clearing and stumping.
 In 27, 34, 35-54-14-5. Improvement of road.
 North of C. N. R. between Secs. 16/17, 20/24-53-15-5. Improvement of road.
 North of Secs. 1, 2, 3-51-26-5. Clearing and grubbing.
 Bet. Secs. 5/6-54-13-5. Improvement of road.
 Wabasca to Lesser Slave Lake. Improvement of road.
 Bet. Secs. 22/23, 27, 32/33-80-25-4. Clearing road.
 North of 12-25-25-4. Culverts.
 North of Twp. 27-23, 24, 25-4. Building culverts.
 In Secs. 12-13, 14-29-20-4 and in Secs. 7/8-20-19-4. Improvement of Vicker's Hill.
 Road north Dead Lodge and Canyon Ferry through Secs. 2/11, 14/15-21-11-4. Improvement of road to Iddesleigh ferry.
 Road through Secs. 8/9, 10/11, 17, 18, 19-29-20-4 and through Secs. 24, 25, 26-29-21-4. Building subway.
 In Twp. 28-18, 19-4. Improvement of road.
 From Ricinus to Dover Court through Secs. 9, 10, 13, 14, 15-36-7-5. Improvement of grade.
 Bet. Secs. 25/26 and 36/35-36-6-5. Grubbing and ditching.
 Road south of Pine Creek Lake east Secs. 22/23 through Secs. 11, east of 2, Twp. 36-25-4, east of 35/36-35-25-4. Cutting down hill and grading.
 Road west of 2 to 35-35-1-5. Grading hills.
 Bet. Twps. 36, 37, 38-22/23-4. Improvement of road.
 North of Twp. 34-25/26-4. Grading road.
 South of Secs. 13 to 18-37-3-5. Laying brush laying culverts.
 North of Secs. 8/9-36-23-4. Work on road allowance.
 Road Waskasso Creek bet. 25/30-36-27/28-4. Ditching road.
 North of Penhold bet. Secs. 23/24-36-28-4. Ditching.
 Bet. 34/35, 26/27, 22/23, 14/15, 11/15, 2/3-35-28-4. Ditching.
 West of Innisfail. Constructing ditch.
 Road north of Secs. 7 to 12-37-1-5. Ditching from road allowance.
 Road bet. Secs. 1/2-37-1-5. Ditching.
 Bet. 3/4-37-1-5. Improvement of road.
 Road east of Twp. 11, 12, 13-22-4, south from N. E. 35-10-22 4. Grading.
 North of Secs. 19, 20, 21-12-21-4. Improvement of road.
 Bet. Secs. 7/18, 8/17, 9/16-13-21-4. Grading road.
 West of Secs. 16-13-21-4. Improvement of road.
 Bet. Secs. 29/30-12-21-4. Improvement of road.
 From Stavely east to Carmangay. Fencing road.
 North of Secs. 17/18, 21/24 east Twp. 20-19-4. Filling and grading.
 Bet. Secs. 11/15-11-24-4. Improvement of road.
 West of Secs. 3 and 10-15-22, Twp. 17, 19-4. Grading.
 East and west of Bow City. Repairing road.
 Bet. Secs. 20/21-17-19-4. Grading up flat.
 North of 16-19-20-4. Grading.
 West of Secs. 4 and 9, south of Secs. 5/6, north of Secs. 9 to 12-18-23-4. Improvement of road.
 Bet. 54/55-11-5. Corduroying.
 From White Whale Lake to Lac Ste. Anne. Culverts and repairs.

South of 25 east of 26 and 35, north from 34/35-54-10-5. Grading and grubbing.

South of Jarrow townsite Secs. 33/34-54-9-5. Improvement of road.

Road at Jarrow in Sec. 27-53-9-5. Grading ditch.

South of 1 and 6-37-9-5, south of 13, 14, east of 3 and 10, south of 3 to 6, Twp. 57-8-5. Grade, clearing ditch.

East of 9 to 35-56-5-3 and east of Secs. 4 and 9-57-5-5. -Corduroy and culverts.

North of Sec. 35/36-54-3-5. Grade and cover corduroy.

East and west of Cilby and north to Secs. 27/30-54-1-5. Grubbing and grading.

Road leading to ferry at Matthew's Crossing, Twp. 53/54-7-5. Grading, ditching and culverts.

North and south or Darewell, west of Twp. 53, 54, 55-5-5. Clearing, ditching and grading.

East Secs. 2 to 35-59-6-5. Covering corduroy.

East of Secs. 27/34-58-6-5 and east of 22-58-6-5. Covering corduroy.

East of Secs. 2, 11, 14, 23, 26-56-7-5. Repairing road.

South of Secs. 5/6-57-6-5. Laying and covering corduroy.

South through centre of Sec. 4-56-5-5 and through Secs. 28/33-55-5-5. Clearing and repairing road.

North and east of Sangudo, north of Pembina River. Grading and repairing roads.

Road north of Sec. 7/9, 8/10-55-3-5. Laying and covering corduroy.

North of Secs. 10, 15, 22-53-13-5. Covering brush.

East of Sec. 14-50-23-4. Clearing and grubbing.

In Sec. 31-48-26-4. Ditching and grading.

Bet. Secs. 2/3, 10/11-48-24-4. Covering corduroy.

North of Secs. 19/24-50-25/26-4. Grading and ditching.

West of Twp. 48-21-4. Covering brush and corduroy.

Bet. 1/2, 11/12-50-27-4. Grading side hill to bridge.

Bet. Secs. 13/18-50-1/2-5. Grubbing road.

Bet. 10/5, 7/18, 8/17, 9/16, 11/14, 12/13, Twp. 39-25/26-4. Grubbing and grading road.

East of Secs. 3 to 34-48/49-26-4. Ditching grade.

Bet. Secs. 4/5-49-26-4. Covering corduroy.

In Twp. 48-26/27-4, east of secs. 36-47-27-4. Grading with blade grader.

Bet. Twps. 47/48-25, 26, 27-4 and south of Sec. 6 west of Sec. 5-48-24-4. Grubbing and building culverts.

North of Sec. 20/21-49-1-5. Ditching and grubbing.

Bet. Secs. 11/12-50-1-5. Improvement of road.

Road East of Millet. Grading road.

South of Secs. 5 to 32-50-26-4, west of Sec. 32-49-26-4. Covering corduroy.

Bet. Secs. 36/31, 1/6-49/50-25/26-4. Ditching and grading.

South of Secs. 1 to 4-50-24-4. Grubbing and ditching.

Bet. Twps. 47/48-22-4. Improvement of road.

East of Sec. 6-48-24-4. Grading.

West of Secs. 11, 14-23, Twp. 50-3-5. Improvement of road.

West of Twp. 49-26/27-4. Grading road.

East of Sec. 19-49-27-4. Grading with blade grader.

North of Secs. 7 to 12-49-1-5. Clearing.

Bet. 15/16, 21/22-50-27-4. Plowing and scraping road.

North of Sec. 22-48-25-4. Ditching and grading.

East of Sec. 29-49-1-5. Grading road.

South of Sec. 32-48-27-4. Ditching road.

West of Sec. 35-47-25-4. Clearing road.

East of Sec. 30-49-22-4. Grading road.

Bet. Secs. 16/17-49-22-4. Covering corduroy.

South of Secs. 2 to 6-49-22-4. Grading culverts.

From the N.E. Sec. 36-48-24-4 to the N.W. 19-48-23-4. Covering corduroy.

East of Millet, Secs. 31/32-47-24-4. Grading and ditching.

In Secs. 5, 11, 12-42-26-4. Grading with blade grader.

From Blackfalds West Twp. 39-27/28-4. Cutting through hill.

In Twp. 41-27-4. Grading approaches to new bridge.

North of Secs. 3 to 34, Twp. 40-7-5 and bet. Secs. 9/10, 11/16-39-7-5. Ditching and culverts.

Blackfalds to Buffalo Lake Trail. Building road around washout.

From Alix to Bullockville. Raising road.

From Alix Lamerton Twp. 40-23-4. Raising road.

Bet. Twps. 40/41-22-4. Clearing grub.
 Road West of Alex North from Twp. 39, Rge. 23, 24, 25-4. Grading around lake.
 South of Lacombe main road, north-east 22-41-4-5. Grading around slough.
 North of Twp. 40, Rge. 3, 4, 5-5. Filling sloughs.
 Road West of Secs. 3, 10, 15, 22, 27, 34, Twp. 41-3-5. Covering corduroy.
 North of Secs. 9 to 12-41-2-5 and Secs. 7-41-1-5. Side ditching and filling.
 In Secs. 26, 27-34 and 35, Twp. 40-2-5. Side ditching and filling.
 Road bet. Secs. 28/29-40-4-5. Clearing road.
 Road bet. Sec. 16/9-40-5-5. Raising grade.
 East of Secs. 16/21-40-5-5. Side ditching and filling.
 Bet. Secs. 29/32-41-21-4. Raising old grade.
 In Secs. 8/9-40-6-5. Laying corduroy.
 Road bet. 12/13 and West 7/18-40-1/2-5. Grading up to bridge.
 Through the centre of Sec. 4-41-2-5. Grading to bridge and slough.
 Bet. Secs. 2/3, 11/10, 14/15, 22/23, 26/27, 34/35-39-22-4. Grading slough
 North of Secs. 31 to 36-6-7-4. Culverts and grading.
 Bet. Secs. 12/13-10-7-4. Improvement of road.
 Bet. Secs. 2 and 31, 10-11, 14/15- 22/23, 34/35-10-2-4. Repairing washout.
 Road from Macleod to Fishborn. Building new bridge.
 Bet. Secs. 20/29, 21/28-8-25-4. Grading with blade grader.
 Bet. Secs. 11/12-15-28-4. Building culverts.
 Road West of Stavely. Slush scraping.
 Road bet. Secs. 30, 31, 32-14-28-4., Sec. 4-15-28-4. Improvement of road.
 Road West of Sec. 30-22-2-5. Improvement of road.
 Road North of Sec. 22, 23-32-28-4. Brushing and grading.
 Road North of Sec. 12 and East of Secs. 1 and 12 and bet. Secs. 23/24-13/14, Twp. 34-6-5. General repairs to road.
 West of Secs. 1 and 12-33-6-5. Ditching and corduroying.
 North of Sec. 9-33-6-5. Clearing and grading.
 From N.E. of Sec. 21-33-5-5 to the N.W. 19-33-7-5. Corduroying
 West of Secs. 16 and 21-33-6-5. Brushing and clearing.
 Bet. Secs. 16/17-33-3-5. Widening grade.
 Bet. Secs. 15/16-32-2-5. Improvement of road.
 Bet. Secs. 10/15-32-2-5. Grading hill
 From Red Deer River West bet. Twps. 33/34-5/6-5. Grading road.
 West of Secs. 5, 7, 18-33-6-5. Grading road.
 From the N.E. 24-34-3-5 to the N.W. 24-34-4-5. Covering brush and grading.
 Road bet. Secs. 27/28-34-1-5. Improvement of road.
 Road West of Bowden. Ditching and grading.
 Bet. Secs. 27/28-33-23-4. Grading, ditching and culverts.
 North of 19 to 24-34-28-4. Dragging road.
 East of Twp. 34, 35, 36-26-4. Grading and ditching.
 Bet. Secs. 10/16, 21/22, 34-28-4. Grading with slushers.
 In Twp. 34-23/22-4. Grading and small culverts.
 Bet. Secs. 2/3-33-28-4 and bet. Secs. 34/35-32-28-4. Ditching on road allowance.
 North of Sec. 3 to 34-33-28-4. Brushing and filling.
 West of Secs. 3 to 10-43-2-5. Improving road.
 West of Secs. 3, 10, 15, 22, North of 21/22, West of the S.W. 29, North of the South half of 30-42-27-4. Improving road allowance.
 Bet. Secs. 7/18-44-25-4. Improving road.
 Bet. Secs. 21/22-45-26-4, South of Secs. 3 and 4-44-26-4. Improving road.
 Bet. Secs. 8/17-44-3/4-5. Grading road
 Bet. Secs. 16/17, 20/21-43-3-5. Improving road.
 West of Secs. 17 to 20-44-27-4. Fixing road.
 West of Secs. 25 to 36-42-28-4. Grading road.
 East of Sec. 5 to 20-44-27-4, East to Sec. 29/32-43-27-4. Improving road.
 Road from Ponoka to Battle Lake. Grading road.
 East and West of Tristram. Clearing and ditching.
 In Twp. 43, Rges. 26 to 29-4. Grading road.
 Bet. Secs. 4/5, 32/33-42-1-5. Grading road.
 Through the blind line, Twp. 42-26-4 and North of Twp. 42-27/28-4. Improving road.
 North of ferry bank and East. Grading approach to bridge.
 North of Secs. 13 to 15-44-28-4, North of Secs. 14-44-1-5, and North of Secs. 13 to 18-44-27/28-4. Grading.
 Bet. Twp. 44-27/28-4. Grading and cover with corduroy.

West of Secs. 1 to 36-44-22-4. Improvement of road.
 In Secs. 5, 15, 16, 17, 18-43-23-4. Grading.
 Bet. Secs. 1/2 to 6-42-27-4. Improvement of road.
 Twp. 64-1-5 and Twp. 64-26/27-4. Improvement of road.
 Bet. Secs. 35/36-57-3-5. Cutting and clearing.
 From the S.E. 15 to S.W. 30-57-2-5. Cutting and clearing.
 Bet. Secs. 23/24-63-25-4. Corduroying.
 East of Secs. 9 to 33-56-5-5 and East of Secs. 4 and 9-57-5-5. Corduroying
 and culverts.
 East of Lunford, North of Twp. 58-1/2-4. Clearing and ditching.
 N. of Secs. 25/26, 27/28, 29/30-58-1/27-4/5. Stumping and corduroying.
 Road bet. Secs. 1/2-57-3-5. Covering corduroy.
 North of 19 to 24-58-26-4. Grubbing out road.
 East of Twp. 59-1-5. Laying corduroy.
 West of Secs. 3 to 21-59-1-5. Grubbing and grading.
 East and West of Eunice. Ditching and grading.
 Bet. Twps. 57/58-1/2-5. Clearing and grubbing.
 North of Secs. 22/23-78-6-6 and bet. Secs. 20/21-78-6-6. Grading and
 ditching.
 South of Twp. 84-22-5. Bridge over coulee.
 In Secs. 23/24, 21/22, 29/30-83-22-5. Improvement of surveyed road.
 West of Grande Prairie North of Secs. 19 to 23-71-6-6. Openning road.
 North of Secs. 31 to 35-75-7-6 and North of Twp. 73-8-6. Cutting and
 grubbing.
 In Secs. 20/29-83-21-5. Completing grade.
 Bet. Secs. 2/3, 10/11-71-8-6 and bet. 33/34-70-8-6. Grading road.
 Bet. Secs. 4/5-71-8-6. Improving road.
 West of Secs. 6/7-71-6-6. Grading road.
 West of Secs. 16-81-19-5. Grading road.
 West of Secs. 6/7-71-6-6. Grading road.
 North of Secs. 1, 2, 3-72-7-6. Culverts.
 West of Secs. 3 to 22-74-8-6. Fixing mud holes.
 Road bet. West 3 to 34-40-7-5 and bet. 9/10, 15/16-39-7-5. Ditching and
 culverts.
 North 7 to 12-39-5-5. Widening grade and cutting hills.
 North 9/10-39-7-5. Grading road.
 East 2 to 35-39/40-5-5. Grading one mile.
 Snake Lake to Rocky Mountain House. Filling slough and culverts.
 North of 8/9-39-3-5. Improvement of road.
 East of Secs. 5, 8, 17-39-3-5 through from E. of 32 to 5-38-3-5. Clearing
 and grubbing.
 West of Sec. 32-39-4-5. Improvement of road.
 Through Secs. 6/7, 8, 17, 20-43-9-4 and E. of 20 to 32-43-9-4. Repairing
 grade.
 Secs. 8, 17, 16-39-4-5. Improvement of road.
 Secs. 3 to 22-44-10-4 and West of Sec. 34-43-10-4. Cutting brush.
 Bet. Secs. 21/22-40-10-4. Grading.
 Bet. Secs. 4/5-39-1-4. Repairing grade and bridge approaches.
 West of Secs. 18/19-39-2-4. Filling in and grading slough.
 Through centre of Sec. 18-39-2-4 and through Sec. 18 to N.E. of 19-39-2-4.
 Grading side hills.
 In the West half of 27-38-6-4. Improving grade.
 Sec. 20-38-5-4. Improving grade at bridge.
 North of Sec. 20 and part of 21-39-5-4. Grading sloughs.
 Road bet. Secs. 34/35-61-8-4. Corduroy and grade.
 Bet. Secs. 25/26-35/36, Twp. 56-5-4. Grading bank of Moose Creek.
 North of Secs. 12/11-57-6-4. Grading road.
 South of St. Paul Des Metis Twp. 55 to 58-9-4. Grading, grubbing and
 corduroying.
 Bet. Secs. 19 and 24-61-5/6-4. Grubbing and clearing.
 North of Twp. 59-7-4. Corduroying.
 West of Secs. 6 and 31-60-5-4. Clearing and grubbing.
 West of Secs. 17, 20, 29, 32-58-8-4 and bet. Secs. 4/5, 8/9-61-8-4.
 Corduroying.
 West of Secs. 6-55-1-4. Clearing and grading.
 In Secs. 23/24, 25/26-55-4-4. Cutting and grubbing.
 West of S.W. 6-57-6-4, and West of N.W. of 31-56-6-4. Repairing road
 over slough.
 The banks of Battle River, Sec. 8-54-1-4. Cutting brush and grubbing.
 Bet. Sec. 32/33-61-4-4. Clearing and corduroying.

Bet. 24/25-61-6-4. Corduroy and brushing.
 West of Twp. 59/60-8-4. Grading and ditching.
 East of Secs. 26/35-54-3-4. Grading and clearing road.
 Bet. Secs. 13, 14, 23, 24-56-4-4. Corduroy, grubbing and ditching.
 West of Twp. 56-3-4. Grading.
 Bet. Secs. 23/24, 25/25-58-9-4. Improvement of road.
 Bet. Secs. 16/17, 20/21, 28/29-56-9-4. Brushing and clearing.
 Bet. Secs. 14/15, 14/23, 23/24-58-8-4. Grading and corduroying.
 East of Secs. 4, 9, 16, through 61 and 21 East to 29, and North of 29/30-57-4-4 and through centre Twp. 55/56-4-4 to ferry. Improvement of road.
 West of 31-61-4-4. Corduroying.
 Bet. 4/5, 8/9-60-7-4. Clearing and grubbing.
 West of Secs. 2 and 23-60-8-4 and West Sec. 35-59-8-4. Improvement of road.
 Bet. Secs. 10/15, 11/14-61-6-4. Corduroy, grubbing and grading.
 South of Secs. 1, 2, 3-61-6-4. Corduroy and grubbing.
 North of Secs. 20 to 24-57-8-4. Grading.
 Bet. Secs. 4/5-57-6-4. Grading and covering corduroy.
 Bet. Secs. 17/18-61-5-4. Improvement of road.
 East of Sec. 24-56-5-4. Clearing and grubbing.
 South of Twp. 37-17/18-4. Work on sloughs.
 S.E. of Stettler, Twp. 38-18/19-4. Building culverts.
 South of Stettler to Gopher Head. Filling in bad holes.
 North and East of Secs. 15 and 21-38-14-4. Culverts.
 Twelve miles N. from Secs. 4/5, 5/6-39-19-4. Putting fills over sloughs.
 Bet. Secs. 11/12-37-14-4. Improving road.
 Bet. South half of Secs. 32/33-38-19-4. Cutting down hills and filling.
 Six miles South of N.E. corner of Sec. 32-37-17-4. Road through slough.
 North of Secs. 32, 33, 34-34-18-4. Improvement of road.
 Bet. Secs. 10/11, 14/15, 22/23-38-18-4. Improvement of road.
 South of Botha, East of Secs. 4 to 33-37/38-18-4. Building main road.
 Three miles south of N.E. corner of 31-38-18-4. Improvement of road.
 Bet. Secs. 22/27-38-18-4. Improvement of road.
 Bet. Secs. 21/22-51-1-5. Covering corduroy.
 Road East of 6 to 31-41/42-12-4. Improvement of road.
 North of Twp. 4/5-31/32, 33, Twp. 42/43-15-4. Grading sloughs.
 Bet. Secs. 14/15, 22/23-43-15-4. Grading road.
 North of Killam bet. Secs. 20, 29, 32-44-13-4. Improving road.
 South and bet. Secs. 23/24, to bet. 1/2-47-13-4. Grading with blade grader.
 Bet. Secs. 28/29-46-11-4. Grading road.
 Bet. Secs. 21/28-46-11-4. Improvement of road.
 Bet. Secs. 20/29-61-24-4. Improvement of diversion line.
 North of 7, 12, 11, 10-59-18/19-4. Covering corduroy.
 Twp. 58-24/25-4. Grading road.
 W. of Sec. 1 and 36-57/58-22-4. Corduroying.
 West of Secs. 6/7-63-23-4. Cutting, laying and covering corduroy.
 East of Secs. 2 to 23-66-24-4. Clearing and ditching.
 Bet. Secs. 14/15-57-23-4. Cutting and laying corduroy.
 S.W. of Athabasca Landing, Twp. 56/57-22/23-4. Grading.
 From the N.W. 35 Twp. 64-21-4 to the N.E. Sec. 19-64-22-4. Opening culverts.
 Bet. Secs. 15/16-60-18-4. Grading and corduroying.
 East of Sec. 2 to 25-65-22-4. Covering brush and corduroy.
 Bet. Secs. 14/15, 22/23-65-22-4. Grading and culverts.
 Bet. Secs. 1/2, 11/12-64-20-4. Grading and building bridges.
 East of Secs. 1/12, 13/24, 26/35, and N. of 24-60-21-4. Grubbing and clearing.
 North of Secs. 8, 9, 10-64-20-4. Clearing and blasting the stumps.
 Bet. Twps. 59-17/18-4, South to river and bet. Sec. 1/6, 7/12, 13/18-60-17/18-4. Laying and covering corduroy.
 East of Secs. 1 to 36 through the S.E. of Sec. 25 and 36-64/65-22-4. Cutting and laying corduroy.
 Bet. Secs. 15, 22, 16, 21, 20, 21-65-21-4. Grading approach to bridge.
 Bet. Secs. 29/30, 31/32-59-18-4. Clearing and grubbing.
 E. of Secs. 25/36-58-19-4, and Twp. 59-18/19-4. Grubbing and stumping.
 West of Secs. 2 to 35-59-20-4. Cutting and laying corduroy.
 Bet. Secs. 25/26-58-18-4. Clearing and grubbing.
 East of Secs. 4 to 33-58-18-4. Grubbing and stumping.
 East of 5 to 32-58-18-4, East of 4 and 9-59-18-4. Covering corduroy and brush.

South of Twp. 59-17,18,19-4. Clearing and grubbing.
 Bet. Secs. 18/19-59-22-4. Ditching and clearing.
 Bet. Secs. 21/22, 27/28-59-22-4. Grading and improving road.
 Bet. Secs. 1/2-59-22-4. Improving road.
 North of River Lots 15 to 18-58-18-4. Ditching and clearing.
 From the East of 5 to 32-58-24, East of 4 to 33-59/60-20-4. Grubbing,
 ditching and corduroying.
 North of Twp. 58-20/21-4. Covering corduroy.
 Bet. Secs. 31/32-59-24-4 and East of Sec. 6 to 31-60/61-24-4. Grading and
 ditching.
 West of Battenburg, Secs. 25/26-57-23-4. Clearing, grubbing and ditching.
 North of Secs. 20 to 24, East half of 19 through South half of 30 and
 West of the North half of 30, South half of 31, through 35 and 36-64-21-4.
 Clearing and ditching.
 North of Secs. 19 to 23-57-24, and North of Secs. 21/24-57-21-4. Putting
 in culverts.
 South of Secs. 13/14-61-24-4. Clearing and grubbing.
 North of Twp. 59-24-4. Grading and ditching.
 East of 27-34, Twp. 61-24-4, and East of Sec. 3-62-24-4. Cutting down
 bank.
 North of 8 and North of 4 and 9-61-23-4 and West of Sec. 33-60-23-4.
 Ditching road.
 West of Secs. 16, 21, 28, 33-64-21-4. Clearing and grubbing.
 East of Secs. 1 and 12-61-24-4. Building culverts.
 Bet. 8/9, 20/21-55-24-4. Grading and ditching.
 Bet. Secs. 30/31-64-24-4. Clearing and culverts.
 Bet. Secs. 23/22, 26/27-65-19-4. Cutting out road allowance.
 East and West of Bon Accord, North of Secs. 7 and 12-56-23/24-4. Cover-
 ing corduroy.
 E. and West of Morinville, Twp. 55 and 56-24/26. Grading and scraping.
 Bet. Secs. 5/6, 7/8-59-19-4. Drainage work.
 North of Secs. 19/20-59-19-4. Clearing and grubbing.
 St. Albert to Morinville. Brushing grade.
 In Sec. 17-55-25-4. Brushing and corduroying.
 North and South of Basby, bet. Secs. 23/24-57-27-4. Brushing and
 corduroying.
 Bet. Secs. 25/26, 35/36-55-26-4, and bet. Secs. 1/2, 11/12-56-26-4.
 Corduroying road.
 East and North of St. Emile, Secs. 4 to 33, Twp. 58-25-4. Corduroying
 and covering.
 Bet. Secs. 29/30-58-25-4. Corduroying the road.
 Bet. Secs. 19/30 to Secs. 24 and 25-28-22/23-4 and bet. Secs. 24/25-58-24-4.
 Cutting, hauling and laying corduroy.
 East of Secs. 3 and 34-58-24-4. Corduroying.
 Bet. Secs. 3/4 to bet. 33/34-58-24-4, to bet. Secs. 3/4, 21/22-59-24-4.
 Corduroying grades.
 Bet. Secs. 4/5, to bet. 32/33-57/58-24-4. Corduroying grades.
 Secs. 6, 7, 18, 19, 30, 31-57/58-24-4. Grubbing and grading.
 North of Twp. 56-25-4. Covering corduroy.
 Twp. 56 to 58-24/25-4. Grading road.
 West of Twp. 55 to 57-25-4. Grading road.
 Bet. Secs. 14/15-22/23, 26/27, Twp. 54-26-4. Improving the road.
 Bet. Secs. 11/14, 13/14, 23/24, 35/36/57/58-25-4. Grading road.
 Bet. Twps. 57/58, Rges. 24, 25, 26-4. Improvement of road.
 North of Secs. 19, 24 and 22/24-55-25/26-4. Ditching and grading.
 In Secs. 33-53-26-4. Grading and grubbing.
 North of Villeneuve, bet. Secs. 28/29, 16/17, 8/9, 4/5-56-26-4. Grading
 road.
 Bet. Secs. 1/2, to 35 and 36-56-25-4, East of Secs. 2/11-57-25-4. Clearing
 and ditching.
 East of Secs. 28 and 33-55-26-4. Grading road.
 West of Twp. 55/56-26-4. Improving road.
 Bet. Secs. 7 and 18 to bet. Secs. 12/13-55-23 to 28-4, North of Secs. 11 and
 12-55-26-4. Grading road.
 Bet. Secs. 4/5, 8/9-55-25-4. Grading road.
 On the correction line bet. Twps. 54/55-27-4. Scraping road.
 Bet. Secs. 1/2-55-27-4. Improving road.
 Along North branch of Sturgeon River and Big Lake in St. Albert
 Settlement. Grading road.
 Bet. Secs. 2/3 34/35-58-25-4. Grading and improving road.

East and West of Morinville, bet. Twps. 55/56-24 25, 26-4. Wheel scraping road.

Bet. Secs. 2/3 to Secs. 34/35-55-25-4. Wheel scraping road.

From Riviere Qui Barre to Ray in Twp. 55-26-4. Wheel scraping road.

Bet. Secs. 35/36-58-24-4. Grading and covering corduroy.

West of Twp. 11-20-4. Grading road.

East of Secs. 14 to 35-6-22-4. Improving road.

North of Secs. 9 and 10, 11/12-6-20-4. and North of Secs. 7 and 8-6-19-4. Improving mile of grade.

East and West of Bow City, in Twp. 17-17/18-4, North to Secs. 7 to 12 Twp. 17-19/20-4. Improving road.

Bet. Secs. 15/16-9-20-4. Improving road.

Bet. Secs. 32/33, 4/5-51/52-9-4. Improving and grading road.

South of Innisfree to Lake Alice, in Twps. 49, 50, 51-11-4. Opening road and grading slough.

Bet. Secs. 4/5-55-9-4. Improving road.

Around Lake West of Sec. 7, East of Twps. 51 and 52-10-4. Cutting brush for road.

Secs. 31 to 6 and 1 and 36-50/51-9/13-4. Brushing and grading slough.

West of 28 and North of 29-51-11-4. Grading slough.

Bet. Secs. 9/10-51-9-4. Raising grade.

Bet. Twps. 53/54-7/8-4. Raising grade over flats.

Bet. Secs. 26/27-47-5-4. Grading road.

South of Twp. 55-10/11-4. Clearing, grubbing, grading.

North of West of Sec. 32-51-9-4. Fencing around slough.

Bet. Secs. 32/33-54-9-4. Improving road.

Bet. Secs. 3/4, 9/10-54-10-4 and West of Secs. 27 and 34-53-10-4. Cutting brush and grading.

Through Twps. 52-53-9-4. Raising grade over slough.

South of Sec. 30-54-7-4. Repairs to road.

West of Sec. 30-54-7-4. Grading slough.

Bet. Secs. 23 and 14-54-11-4. Improving road.

Bet. Secs. 12/13-54-11-4. Grading road.

Through Twp. 53, 54, 55-11-4. Covering corduroy.

Bet. Secs. 20/21-54-11-4. Improving road.

North of Twps. 53-10, 11, 12-4. Grading road.

S.E. corner of Sec. 4-53-9-4 to N.E. corner of Sec. 33-54-9-4 then South. Improving road allowance.

East of Secs. 1 to 25-50-7-4. Rounding up grade.

North of Secs. 10, 11, 12-55-12-4 and North of 7 to 12-55-11-4. Levelling up road.

Across Grizzley Bear Coulee. Repairing grade.

South of Mundare. Secs. 6 to 19-52-16-4. Improving road.

Bet. Secs. 10/11, 11/14, 12/13-52-17-4. Brushing road.

Bet. Secs. 16/17-52-15-4. Grading and repairing.

West of 33, 28, 21, 16, 10, 3 and West of 10-51-16-4. Improving road.

Bet. Secs. 10/11-52-16-4. Improving road.

Bet. Secs. 22/23-54-19-4. Repairs to road.

East and West of Chipman. Improving road.

Bet. Twps. 53/54-15-4. Repairs to road.

North of Secs. 20 to 24-53-16-4. Grading and filling.

North of Sec. 36-50-17-4. Repairs to road.

Bet. Secs. 5/6, 31/32-51/52-15-4. Improving road.

Bet. 7/18 to bet. 12/13-53-11 to 14-4. Grading road.

North of Sec. 31, 32, 36-52-13, 14, 15-4. Repairs to road.

Running North Twps. 52, 53, 54-13-4. Improving road.

Bet. Secs. 11/14-52-13-4 to bet. Secs. 10/15-52-14-4. Improving road.

Bet. Secs. 3 and 34-51, 52-13-4. Grading and filling.

Bet. Secs. 3/4, 9/10-52-12-4 to bet. Secs. 33/34, 27/28, 21/22-51-12-4. Improving road.

Through Secs. 14 and 13, South of Secs. 14/13, Twp. 51-12-4 and through centre of 18-51-11-4. Grading and filling.

South of Ranfurly. Improvement of road.

Bet. Secs. 10/15-49-14-4. Raising grade.

From Riley to Holden. Improving road.

East of Riley, South of Twps. 49/50-15-4. Grading and filling.

East and West Kingman. Improving road.

Bet. Secs. 34/35-50-19-4. Repairs to road.

East of Sec. 26-50-19-4. Grading up low places.

Bet. Secs. 21/22-54-19-4. Improving road.

North of Secs. 19/20-51-12-4. Levelling road.
 Bet. Secs. 20/21-51-12-4. Improving road.
 West of Ranfurly. Grading and levelling.
 North and South of Holden. Improvement of road.
 In Secs. 2 to 35-49-16-4. General repairs to road.
 North of N.E. of 14-49-16-4. Grading and filling.
 Bet. 15/16-50-13-4. Improvement of road.
 West of Twp. 52-17-4. Repairs to road.
 Road from Warstock to Chipman bet. Secs. 14/15-55-18-4 and bet. Secs. 10/11-56-18-4. Corduroying road.
 Bet. Secs. 2 and 35-55/56-17-4. Corduroying road.
 Bet. Secs. 3/4, 9/10-58-18-4. Covering corduroy.
 Bet. Twps. 55/56-17/18-4 and bet. Secs. 1/6, 12/7-57-17/18-4. Covering corduroy.
 From Lamont station North and West from Secs. 8/9-56-19-4. Covering corduroy and grading.
 Bet. Secs. 12/13, 11/14, 14/15-55-19-4. Culverts and grading.
 Bet. Secs. 5/6-54-20-4. Grading low spots.
 West of Sec. 35-5-17-4 West to 35-6-17-4. Improvement of road.
 South of New Dayton. Improvement of road.
 Sec. 18-55-13-4 and Sec. 13-55-14-4. Grading slough.
 Bet. Twps. 59-17/18-4. Laying and covering corduroy.
 East of Secs. 5, 8, 17, 30, 29, 33-55-13-4. Laying corduroy.
 Bet. Secs. 34/35-59-16-4. Corduroying road.
 Bet. Secs. 12/13, 11/14, 17/18-59-17-4. Improving road.
 East of Secs. 24, 25, 36-59-17-4. Corduroying road.
 In Twp. 58-13-4. Cutting hills and grading.
 West of Secs. 1, 12, 13, 24-59-13-4 and West of Secs. 26 and 35 North of 20 to 22, West of Secs. 5 to 8, 17-20-58-13-4. Grading sloughs.
 West of Secs. 2 to 23-58-13-4. Corduroying sloughs.
 Twp. 59-16-4 and Twp. 58-17-4. Corduroying culverts.
 Road West of Sec. 13-55-13-4. Improvement of road.
 North of Secs. 10, 11, 12-55-12-4 and North of Secs. 7 to 12-55-11-4. Work on slough.
 North of Smoky Lake. Corduroy work.
 West of Secs. 16 and 33-58-17-4. Improvement of road.
 Bet. Secs. 23/24-58-13-4. Cutting down hill.
 Bet. Secs. 21/22-45-26-4 and South to Secs. 3 and 4-44-26-4. Corduroy work.
 Bet. Secs. 16/17, 20/21-47-23-4. Laying corduroy.
 Bet. Secs. 8 and 17-45-2-5. Grubbing, grading and clearing.
 Bittern Lake, Dried Meat, Beaver Lake to Wetaskiwin. Repairing holes in road.
 Bet. Secs. 1 and 2-46-24-4. Grading and ditching.
 West of Secs. 14 and 23, 26/35, Twp. 45-26-4 and bet. Secs. 2/3, 10/11-46-26-4. Improving road.
 Bet. Twps. 45/46-26-4. Grader work.
 Running North and South bet. Secs. 33/34-45-26-4 and South bet. Secs. 21 to 28, 20/29, 19/30. Improvement of road.
 Wetaskiwin to Coal Lake. Grading road.
 North of Secs. 19 to 24-46-25-4 and North of Secs. 19 and 20-46-24-4. Repairing with wheel scraper.
 Bet. Secs. 28/29-47-25-4. Covering corduroy.
 Bet. Secs. 15/16-47-26-4 South to Pigeon Trail in Twp. 46-26-4. Improvement of road.
 North of Sec. 8-47-22-4. Grading road.
 In Twp. 47-3-5. Ditching and grubbing.
 N.E. of Sec. 10, North of Secs. 7, 8, 9-46-2-5. Clearing and grubbing.
 South of Secs. 28 and 30-47-23-4. Grading work.
 In Twp. 47-25/26-4. Ditching.
 East of Secs. 3 and 10, South of 1 and 2, South of 1 and 6-47-24/25-4. Grading.
 Road North from Ferry bank. Grading approaches to bridge.
 North of Secs. 31/32, 35/36-45-27/28-4. Grading work.
 North of Chesterwold. Wetaskiwin Pigeon Lake Trail. Work on road allowance.
 Bet. Twps. 44/45-2/3-5. Clearing and grading.

TRUNK ROADS

During 1917 trunk road construction and maintenance was undertaken on the following main roads:

Road North from Cereal.
 Road North from Empress.
 Road North from Youngstown.
 Road South from Youngstown.
 Road along Goose Lake Line, C.N.R.
 Road South one mile East of Chinook.
 Road North of Stoppington running West
 Road North and South of Sibbald.
 Road South of Sunnydale and North of Seal.
 Road South from Goose Lake Line, C.N.R.
 Road North of Lloydminster.
 Road North of Islay.
 Road North from Blackfoot.
 Road North Kitscoty leading to Ferry.
 Road from Islay South to Battle River.
 Road from Athabasca Landing to Lesser Slave Lake North of River.
 Road from Athabasca East to Donatville.
 Road from Athabasca Landing North.
 Road from Athabasca to Baptiste Lake and North.
 Road from Fort McMurray to Lac La Biche.
 Road from Fort Vermilion to Smith Landing and Fort Smith
 Road from Lac La Biche to Athabasca Landing.
 Road from Athabasca North to Wabiscaw.
 Road around East end of Lac La Biche.
 Road Plamondonville to Lac La Biche Station.
 Road from St. Paul des Metis to St. Vincent.
 Road from Therien to Grandin.
 Road from Brosseau to St. Paul des Metis.
 Road from Abilene to Ashmont.
 Road from Ashmont to Lac La Biche via White Fish Lake.
 Road from Abilene South and East.
 Road from Montague Lake West.
 Road from Bassano south and west.
 Road from Brooks Station to Mesekum.
 Road from Cluny East.
 Road from Cluny North to Ouelletteville.
 Road from Cluny West to Gleichen.
 Road from Bassano to Brooks Station.
 Road from Duchess North to Red Deer River.
 Road from Millicent North to Red Deer River.
 Road from Drumheller East along Red Deer River.
 Road from Kinnondale to Bassano Ferry.
 Road from Cluny South to Milo.
 Road from Brooks North to Duchess.
 Road from Calgary to Gleichen.
 Road from Calgary to Bowness.
 Road from Dusseldorf North to Neerlandia.
 Road from Mellowdale to Fort Assiniboine and North.
 Road from Edson to Grande Prairie.
 Road from Barrhead west.
 Road from Castor east along C.P.R. line to boundary.
 Road from Fleet south to Clement Lake.
 Road from Veteran north.
 Road from Kerriemuir south.
 Road from Cardston to Magrath.
 Road from Cardston south.
 Road from Cardston to Mountainview.
 Road from Calgary to Macleod.
 Road from Calgary to Morleyville north of Bow River.
 Road north of Airdrie running west.

Road between Cremoma and Dog Pound running east and west.
Road from Calgary to Morleyville south of Bow River.
Road west of Crossfield.
Road west of Nose Creek north of Airdrie.
Road east and west of Camrose.
Road north of Daysland.
Road from New Norway east to Viewpoint and south.
Road south of Camrose to Bashaw
Road east and west of Donalda.
Road from Ohaton to Meeting Creek and south.
Road between Ferintosh and Edberg.
Road south of Bawlf to Donalda.
Road from Ohaton north to Round Hill.
Road from Bawlf north.
Road from Hay Lakes south.
Road between Daysland and Strome.
Road from Bergen east.
Road from Three Hills east.
Road from Edmonton south to South Cooking Lake.
Road from Deville to Uncas and north.
Road from Edmonton South, east.
Road from west of Ministik Lake north.
Road along base line east of Edmonton.
Road from Blackmud Creek west.
Road from Edmonton to Calgary.
Road between Tollerton and Dandurand.
Road from Peers to Macleod River.
Road from Edson north.
Road from Edson to McLeod Valley.
Road from Thornton to Peers.
Road from west of Mussel north.
Road from White Fish Lake to Peace River district.
Road from Lesser Slave Lake to Sturgeon Lake.
Road from Big Prairie to Prairie River Settlement.
Road from Lesser Slave Lake to Peace River Landing.
Road south from Swan River Settlement.
Road from Sawridge south.
Road north and south of Falher.
Road from Lesser Slave Lake to Spirit River.
Road from Sawridge north of Lesser Slave Lake.
Road south of Lesser Slave Lake.
Road east of Gleichen.
Road east and west of Beiseker.
Road from Gleichen south.
Road from Langdon north.
Road from Stettler to Drumheller.
Road from Hanna south.
Road from Craigmyle north.
Road from Delia north.
Road from Clystie north through Mecheche.
Road from Delia south.
Road from Craigmyle to Little Fish Lake.
Road from Innisfail west to Clearwater River.
Road from Innisfail to Elnora and east.
Road north and south of Lomond.
Road from Nobleford east.
Road from Nobleford west.
Road from Macleod to Lethbridge.
Road from Lethbridge to Bow Island.
Road from Edmonton to Entwistle.
Road from Lac Ste. Anne to White Court.
Road from Rochfort north.
Road from Peavine south to Paddle River.
Road from Lac Ste. Anne to Cosmo and north.
Road from Alberta Beach north.
Road from St. Albert to Lac Ste. Anne.
Road from Glenford southwest of Onoway.
Road from Jenkins north.

Road from Entwistle south.
Road from Fallis north.
Road east and west of Buford.
Road west of Leduc.
Road from Millet west.
Road from Leduc east.
Road from Lacombe west to Bingley.
Road from Lacombe to Mirror.
Road east and west of Donalda.
Road from Medicine Hat to Cypress Hills.
Road from Thelma west and north of railroad.
Road from Medicine Hat to Seven Persons.
Road from Seven Persons north.
Road from Seven Persons west.
Road from Medicine Hat south to Comrey.
Road from Medicine Hat east to Irvine.
Road from Namiscam north.
Road from Etzikom south.
Road from Nemiscam south.
Road from Seven Persons south.
Road from Seven Persons south to Pakowki.
Road from Winnifred south.
Road west and north of Macleod.
Road from Macleod south.
Road south from Macleod to Belly River.
Road from Macleod to Pincher.
Road from Nanton west to Sheppard Creek.
Road from Stavely to Willows.
Road from Calgary to Millerville.
Road from Okotoks to west of Black Diamond.
Road from Olds east.
Road from Bowden west.
Road from Sundre west.
Road from Pincher Creek to Pincher.
Road from Pincher Creek south to Oil City.
Road from Pincher west through Cowley.
Road from Brockett south.
Road from Ponoka east.
Road from Ponoka west.
Road from Homeglen west and south.
Road from Dunstable east.
Road east and west of Clyde.
Road from Mosside to Belvedere.
Road from Majeau Lake east.
Road from Rossington south.
Road from Paddle River south.
Road from Westlock south.
Road from Dunrobin east.
Road from Shaftesbury along north bank of river.
Road from Dunvegan to Grande Prairie.
Road from Shaftesbury Settlement to Dunvegan.
Road from Beaver Lodge to Swan Lake.
Road from Lake Saskatoon to Beaver Lodge River.
Road from Bezanson east and west.
Road west from Spirit River Settlement to Ponce Coupe.
Road east of Red Deer.
Road west of Red Deer.
Road east and west of Sylvan Lake.
Road from Frank to Crow's Nest Lake.
Road from Frank east to Lundbeck.
Road from Cadogan north.
Road from Hardisty to Longheed.
Road from Puffer to Hardisty.
Road from Hardisty east along C. P. Railway to boundary.
Road from Suffield north to Jenner Ferry.
Road from Alderson east.
Road from Alderson to Kininvie.
Road from Agatha to Alderson.

Road from north and south of Pashley.
 Road north and south, west of Julian Lake.
 Road from St. Paul des Metis to St. Edward.
 Road from Beaver Crossing west.
 Road from Moose Lake to Cold Lake.
 Road from Frog Lake to Cold Lake.
 Road from Frog Lake to Onion Lake.
 Road from Mooswa north to St. Pierre Lake.
 Road from Frog Lake south.
 Road from Moose Lake to Frog Lake.
 Road from Elk Point to St. Paul des Metis.
 Road from Durlingville north to river.
 Road from Sinking Lake south.
 Road from Stettler to Castor.
 Road from Kanata to Stettler.
 Road from Halkirk south.
 Road from Stettler to Donalda.
 Road from Halkirk to Castor.
 Road north of Halkirk.
 Road north and south of Botha.
 Road from Heart Lake to Gadsby.
 Road from Erskine north.
 Road south of Castor.
 Road from Edmonton to St. Albert.
 Road from Spruce Grove north.
 Road from Kinsella south.
 Road south of Wood Glen.
 Road from Sedgewick to Strome.
 Road from Bruce to Kinsella.
 Road from Viking north.
 Road north and south of Alliance.
 Road from Loughheed east.
 Road from Sedgewick to Loughheed.
 Road south of Killam.
 Road from Loughheed to Loraine.
 Road from north of Loughheed.
 Road from Daysland to Strome.
 Road east of Grainland south.
 Road from Edmonton to Athabasca.
 Road from Colinton to Boyle Siding.
 Road from Edmonton to Fort Saskatchewan.
 Road from Victoria to Fort Saskatchewan.
 Road from Fedora to Duagh.
 Road east and west north of Colinton.
 Road from Cookville north.
 Road from Waugh west.
 Road from Lobstick Settlement north.
 Road from north of Lamoureux.
 Road from south of Waugh east to river.
 Road from Lily Lake west.
 Road from Halfway Lake to Byron Siding.
 Road from St. Albert to Dunrobin.
 Road from St. Albert to Calahoo.
 Road from Diligence to Busby.
 Road from Seymour east to Egg Lake.
 Road from Taber to Retlaw.
 Road south of Burdett.
 Road from Raymond north.
 Road from Welling to Raymond and north.
 Road from Foremost north.
 Road from Wells Siding west.
 Road from Stirling south.
 Road running eastward and west through Forty Mile Coulee.
 Road south of Bow Island.
 Road from Edmonton to Lloydminster.
 Road north of Innisfree.
 Road from Vermilion north.
 Road from Manville north.

Road from Vermilion to Landonville.
 Road from Vermilion south.
 Road from Manville south.
 Road from Minburn north.
 Road from Minburn south.
 Road from Northern Valley north.
 Road from Mundare south.
 Road from Kingman north.
 Road from Tofield to Chipman.
 Road from Mundare to Pakan.
 Road from Vegreville south to Strome.
 Road from Vegreville north.
 Road from Tofield to Holden.
 Road from Vegreville to St. Paul.
 Road from Ranfurly south.
 Road from Fort Saskatchewan east.
 Road from Bruderheim north.
 Road from Fort Saskatchewan to north of Whitford Lake.
 Road from Whitford Lake north.
 Road from Edgerton to Jarrow.
 Road from Baxter south and west.
 Road north and south of Edgerton.
 Road from Foremost south to Kippinville.
 Road from New Dayton north and west.
 Road from Milk River to Kippinville.
 Road from Warner west.
 Road from Warner to Milk River.
 Road from Warner to New Dayton.
 Road from Milk River to Coutts.
 Road from Boian to Desjarlais Crossing.
 Road from Shandro north.
 Road from Shandro south.
 Road from Victoria to Smoky Lake.
 Road from Fort Saskatchewan to Andrew.
 Road from Duverney to Warwick.
 Road northwest from Bear Hills Lake.
 Road from Wetaskiwin to Buck Lake.
 Road from Wetaskiwin east.
 Road from Duhemel west.
 Road from north of Pigeon Lake east.
 Road from Millet west to Bonnie Glen.

Work performed in 1917 by the Department in Administration of
L. I. D. Trust Fund:

Road east of Secs. 17, 20-25-8-4.
 Trunk road, Athabasca to Grosmount.
 Road north of Sec. 7, 8, 9, and east of 16, 21-66-23-4.
 Road around the south and east of Baptiste Lake.
 Road between Secs. 8/9-68-24-4.
 Trunk road Peace River road.
 Road north of Secs. 34, 35-67-27-4.
 Road north from Fort Vermilion..
 Road Fort Vermilion-Hay River trail.
 Trunk road east of Secs. 8, 17-62-10-4.
 Road between Normandeau-Lac La Biche trail
 Road between 34/35-67-14-4.
 Road in Sec. 25-66-15-4.
 Road between Secs. 12/13, 11/14-68-17-4.
 Road between Secs. 13/18, 24/19-68-17-4.
 Road between Secs. 31/36-67-15/16-4.
 Road south of S.E. $\frac{1}{4}$ 2-19-14-4.
 Road between Secs. 31/32-19-20-4.
 Road west of Secs. 26, 35-19-20-4.
 Road east of Secs. 21, 33-19-20-4.
 Road between Secs. 7/8-20-19-4.
 Road between Secs. 32/33-19-20-4.
 Road south of Sec. 14-18-18-4.

Road Patricia north to Steveville Ferry.
 Road between Secs. 1/2-19-14-4.
 Road north of Sec. 11-19-14-4.
 Road between Secs. 24/23-20-18-4.
 Road from Bassano 1/2-19-20-4.
 Road north from 20-16-4.
 Road south from Latham.
 Trunk road Bassano to Hutton.
 Road between Secs. 17/18-24-20-4.
 Road 11-24-20-4.
 Trunk road south of Magrath.
 Road south of Secs. 13 to 18-1-21-4.
 Road north of Twp. 1-20/21-4.
 Road between Secs. 17/18, 19/20-1-21-4.
 Road Macleod south to U. S. boundary line.
 Road between Secs. 19/30-3-24-4.
 Road north Twp. 1-24-4.
 Road east of 12 and 24-1-24-4.
 Road between Secs. 8/17, 9/16-3-24-4.
 Road between Secs. 17/18, 19/20-3-24-4.
 Road between Secs. 3/4 3-24-4.
 Road east of 14 and 23-1-24-4.
 Road north from 35 and 36-2-24-4.
 Road east of 5 to 17-2-24-4.
 Road east of 8 and 23-2-24-4.
 Road east of 20 and 29-2-24-4.
 Road between Secs. 29/30-1-23-4.
 Road south and west through 24-3-25-4 and 19-3-24-4.
 Road three miles west from Mountain View
 Road through Secs. 32, 26, 23, 22, 15 to 17-2-26-4.
 Road between Cardston and Boundary Creek.
 Road between Secs. 25/26 and 35/36-2-28-4.
 Road west of Sec. 19-2-27-4.
 Road between 22/23 and 14/15-2-26-4 and 11-2-26-4.
 Road east of Secs. 12 and 13-2-26-4
 Road in Section 33-1-26-4.
 Road west of Sec. 18-1-26-4.
 Road 14-1-27-4.
 Road between Secs. 22/23-5-21-4
 Road north of Secs. 32 and 33-4-21-4.
 Road east of Secs. 5 to 29-5-21-4.
 Road west of Secs. 7, 18, 19-5-20-4.
 Road west of Sec. 6-5-19-4 and south twelve miles.
 Road north of Sec. 33-5-20-4.
 Road between Secs. 28/29-5-20-4.
 Road between Secs. 22/23-5-21-4.
 Road between 17/18, 19/20, 29/3, 31/2, 5-20-4.
 Road between Secs. 19/30-5-22-4.
 Road north of 7, 8, 9-4-24-4.
 Road between 29/30-5-22-4.
 Road 7-11-28-4.
 Road (survey) through Twp. 12-27/28-4.
 Road between Secs. 24/25-12-28-4
 Road (survey) through Sec. 12-9-28-4.
 Road between 3/4-9-29-4.
 Road north 36-11-28-4.
 Road between 10/15-12-28-4.
 Road north of river 29-31-10-2-5.
 Road Stavelly Willows trail.
 Road between 1/2-60-3-5.
 Road between 34/3-60/61-3-5.
 Road between 25/26-60-3-5.
 Road between 5/6, 7/8-60-3-5.
 Road between 22/23-60-3-5.
 Road between 1/6, 7/12, 13/18-60-3/4-5.
 Road between 31/36-61-5/6-5.
 Road between 18/19-62-6-5
 Road north to 25 to 30-70-11-6.

Road between 33/34-70-8-6 and 2/3, 10/11-71-8-6.
 Road Cochrane Springbank road.
 Road through 34-24-4-5.
 Road Cochrane south across Bow River.
 Road leading to Jumping Pound Creek.
 Road north 7 to 12-25-4/5-5.
 Road north of Twp. 24/25-4-5.
 Road 14-24-5-5.
 Road between 22/23-28-4-5 and 19/15-27-4-5.
 * Trunk road Calgary and Banff trail.
 Road 1-28-4-5.
 Road between 15/16-26-4-5 (Cochrane to Horse Creek).
 Road north of Sec. 7-27-4-5.
 Road between 27/28-28-4-5.
 Road east of Sec. 36-27-4-5.
 Road between 34/35-26-3-5.
 Road 14-26-4-5.
 Road Twp. 28-3-5.
 Road between 24/25-27-2-5.
 Road between 14/15-26-4-5.
 Road between 16/21-28-4-5.
 Road north Twp. 26-4-5.
 Road 27-4/5-5.
 Road between 4/5, 8/9-26-3-5.
 Road between 7/8-27-4-5.
 Road 13-26-4-5.
 Road north of Secs. 7 to 12-27-5-5.
 Road north of Sec. 35-26-5-5.
 Road east of Twp. 27-4-5.
 Road between 11/26-27-5-5.
 Road east 36-26-6-5.
 Road 29-29-5-5.
 Road through 35/36-29-5-5.
 Road between 11/14-29-5-5.
 Road between 14/15-29-5-5.
 Trunk road Castor east along C.P.R. to 4th meridian.
 Road N.W. $\frac{1}{4}$ 22-33-3-4.
 Road 36-34-4-4.
 Road east 15 to 22-36-4-4.
 Road north of 36-34-5-4.
 Road north 12-35-4-4.
 Road north 11-36-4-4.
 Road Veteran and west four miles.
 Road east of 8 and 17-35-7-4.
 Trunk road, Veteran and north eight miles.
 Road Secs. 9 to 11-26-2-5.
 Road between 28/29-25-1-5.
 Road east 24 and 25-26-2-5.
 Road between 8/9-26-2-5.
 Road west of Rocky Mountain House.
 Road through Twps. 39, 40, 41-7-5 (north of ferry).
 Road west of 30-53-13-5.
 Road 6-54-13-4.
 Road north of 22-53-14-5.
 Trunk road Edson to Marboro'.
 Trunk road Macleod Valley, Shining Bank trunk road.
 Road north of 36-54-15-5.
 Road east of 4, 9, 16-57-14-4.
 Trunk road Edson to Macleod.
 Road north 33-22-22-4.
 Road Standard and Gleichen road.
 Road between 29/30-22-22-4.
 Trunk road Sawridge to E. D. & B. C. station.
 Trunk road Grouard to High Prairie.
 Trunk road Grouard to St. Bruno Mission.
 Road east of Secs. 27 and 34-74-17-5.
 Road between Secs. 25/26-74-17-5.
 Road east of 18 and 19-77-19-5.

Road east of 20 and 29-77-19-5.
Trunk road north approach to Drumheller bridge.
Road Vickers Hill, East of Drumheller.
Trunk road Delia south.
Road (surveyed road) across Willow Creek.
Road east of Secs. 27 and 34-28-19-4.
Road north of Secs. 2, 3, 24-28-19-4.
Road between 7/8-18-2-5.
Road north 35-17-2-5.
Road between 5/6-37-6-5.
Road between Leaman and Lobstick bridge.
Road north of Twp. 59-11-4.
Road from Whitecourt south.
Trunk road south of Lethbridge over trestle, six mile coulee.
Trunk road Lethbridge to steel bridge over Belly river.
Road north from between 16/17-9-21-4 to Barres coal mine.
Trunk road 2-9-22-4.
Road east of 15 and 21-8-22-4.
Road S.E. corner 14-10-22-4 and four miles north.
Road S.E. corner 4-10-22-4 and six miles north.
Road S.E. of 9-22-4 Little Bow.
Road between 17/18-13-21-4.
Road south of 16 and 17-13-21-4.
Road north of 31 and 32-10-22-4.
Road east of 9 and 16-13-21-4.
Road between 2/3-12-21-4.
Road west of 16-13-21-4.
Trunk road south of 11-23-4.
Road east of 4 to 21-17-19-4.
Road west of 6 to 18-17-20-4.
Road between Secs. 15/16-10-24-4.
Road east of Secs. 7, 18, 19-10-23-4.
Road between Secs. 14, 15, 22, 23-10-23-4.
Trunk road Medicine Hat to Eagle Butte and south.
Road north of Secs. 3 and N.E. of 4-1-2-4.
Trunk road Comrey north to Medicine Hat.
Trunk road south Orion.
Road N.E. 32-1-4-4.
Road north of 11 and 12-2-6-4.
Road north of 19, 20, 21-3-6-4.
Trunk road north of Sec. 12-3-9-4 and Secs. 8 and 17-38-4.
Road between 15/16 and west of 27 and 34-3-8-4.
Road from N.E. corner of 35-3-9-4.
Road 29-2-10-4.
Road south of 3 and 4-3-10-4.
Road west of 2 to 35-3-10-4.
Trunk road north of 9, 10, 14-6-5-4 and in 6-4-4.
Road east of Sec. 6-6-5-4.
Trunk road from Walsh to U. S. boundary line.
Road north of 34 and 35-9-2-4 and Secs. 35 and 36-9-3-4.
Road diversion on N.E. 36-9-3-4.
Road north of Sec. 24-9-3-4 and north of 19-9-2-4.
Road north of 22 and 23-7-3-4.
Road east of 36-11-3-4.
Trunk road south of Walsh through Twps. 10/11, 9-8-1-4.
Road east and west through Twps. 8-3-4.
Road north of 34-6-2-4.
Road north of 7, 8, 9-7-2-4.
Road east of 24, 25, 36-9-4-4.
Road Bull's Head to S.W. corner 15-6-5-4.
Road between 5/6-9-9-4.
Trunk road Pakowki and Seven Persons.
Road south of Whitla.
Road between 13/14-7-9-4.
Trunk road south of Irvine.
Road south to boundary to township to Walsh.
Trunk road between Irvine to Walsh.
Road north of Sec. 11-11-3-4.

Road east of 13, 24, 25, 26 12-3-4.
Road east of 2 to 11-11-2-4.
Road east of 3-12-1-4.
Road Sec. 33-10-7-4.
Road east of 14, 23, 26-12-9-4.
Road east of 3 to 22-12-9-4.
Road east of 36-11-10-4 and east of 12 and 13-12-10-4.
Road east of 28-11-9-4.
Road north of 8-11-9-4.
Road east of 29-10-7-4.
Road north of 31 to 36-11-9-4.
Road east of 29-11-9-4.
Road east of 30 and 31-11-9-4 and east of 18-12-9-4.
Road east of 28-11-8-4.
Road north of 12-10-7-4.
Road N.E. of 20-11-9-4.
Road east of 21-12-9-4.
Road between 1 and 12-16-29-4.
Road Twp. 71-9-6.
Road south of Twp. 74-6-6.
Trunk Road Beaver Lodge to Hythe.
Road north of 7 and 8-81-19-5.
Trunk road Peace River trail.
Trunk road between Dunvegan and Spirit River.
Trunk road Pouce Coupe trail.
Road through centre north and south Twps. 78-6-6.
Road between 19/30-78-5-6.
Road grade between Hart and Smoky River.
Trunk road Shaftsbury trunk road.
Road through Twps. 83-23-5.
Trunk road north and east of Sec. 4-60-1-5.
Road south of 4-60-1-5.
Road between 9/10-60-1-5.
Road east of Twps. 60 and 61-2-5.
Road Sec. 15-61-1-5.
Trunk road north of Medicine Hat through Waddington.
Trunk road in S.E. corner of 6-13-24, north of Hilda.
Road south of 5-13-4-4.
Trunk road Medicine Hat to Howell.
Trunk road Medicine Hat to north boundary 36-15-6-4.
Trunk road Howell to Suffield.
Road between 11/12-14-7-4.
Road east of 15 and S.E. 22-14-6-4.
Road between 33/34-13-6-4 and 3 and 4-14-6-4.
Road south of Howell between Rges. 7/8-13/14-4.
Road between 9-10-13-8-4.
Road north of Secs. 19 to 24-13-8-4.
Road through Secs. 16, 21, 28-14-2-4.
Road N.E. corner 34-13-4-4 to N.E. corner 16-14-3-4.
Trunk road south of Jenner.
Road between Secs. 14/15-20-9-4.
Road east and west from Jenner.
Road between 11/12, 13/14-20-9-4.
Road east of 19 and 30-19-10-4.
Road north of 19 and 20-19-10-4.
Road between 15 and 16-20-10-4.
Road between 34/35-20-10-4.
Road through 5, 8, 16, 21-38-7-5.
Road north of S.W. corner of 1-39-7-4.
Road east of 4 and 9-40-9-4.
Road from N.E. corner of 23-39-7-4 to N.E. corner 19.
Trunk road between Frank Burness.
Trunk road through Crow's Nest Pass south of lake.
Trunk road Sec. 2-10-3-5 south.
Road between Frog and Onion lakes.
Road Sec. 33 to 35-55-3-4.
Road between 19/20-55-3-4.
Road east of 1-55-2-4.

Road between 23/24-58-9-4.
Road north of 8-57-8-4.
Trunk road west of 10 and 15-56-9-4.
Road south of 31 and 32-61-3-4.
Road east of 31 and 36-61-5-4.
Road 1 to 24-63-6-4.
Road east of 22 and 27-65-19-4.
Road east of 2 and 11-64-20-4.
Road north of 21 and 24-6-21-4.
Road through Sec. 28-6-19-4.
Road of 25 to 27-6-19-4.
Road east of 16 and 21-6-20-4.
Road east of 15 and 22-6-19-4.
Road between 22 and 24-6-20-4.
Road south of 3 to 6-6-22-4.
Road east of 3, 10, 15 22-6-22-4.
Road from Barnwell south to Sec. 29-8-17-4.
Trunk road east from Sterling to Wrentham.
Trunk road Taber north across steel bridge.
Road west of Sec. 6-10-18-4.
Trunk road Chin to S.E. of 1-10-16-4.
Road east of 27-10-16-4.
Road between 20-21-10-16-4 and Secs. 8 and 9-9-16-4.
Road through 17/18, 5/6-7-21-4.
Road between 10-15, 11/14, 13/12-9-21-4 and 7/18, 8/17, 9/16, 10/15-9-20-4.
Road between 27/28-7-21-4.
North of 35 and 36-8-20-4 and 31 and 32-8-19-4.
Road north of 35 and 36-6-20-4.
Road between 1/2-9-20-4.
Road bet. 22/23-28-20-4.
Road bet. 34/35-9-20-4.
Road bet. 32/33-8-20-4.
Road bet. 1/2-7-20-4 and 11 and 12-7-21-4.
Road bet. 33/34-7-20-4 and east of 21 and 28-7-20-4.
Road west of Secs. 7-8-20-4.
Road bet. 33/34-8-20-4.
Road between 21/28-7-21-4.
Road south of 1-8-20-4 and 5/6-8-19-4.
Road north of 9/10-7-20-4 and 7-7-19-4.
Road north of 22-11-20-4.
Trunk road north of Coaldale.
Road south of Sec. 2-12-19-4.
Road between 21/22, 15/16, 9/10, 3/4-11-20-4.
Road 11, 10, 15-11-19-4.
Road between 28/29-11-15-4.
Road east of 6 to 31-15-8-4.
Road east of 21 to 23-16-18-4.
Road east of 17 to 32-14-18-4.
Road east of 15 to 34-15-18-4.
Road east of 14 to 35-15-18-4.
Road south of 7 and 18-14-18-4.
Road south of 3, 4, 5, 6-14-18-4.
Road 7 to 12-15-18-4.
Between 22/27-15-18-4.
Road between 26 and 27-15-18-4.
Road south of 13 to 18-16-18-4.
Road between 19 and 30-16-18-4.
Road between 3,4, 9, 10-17-18-4.
Road between 5/6-17-18-4.
Road bet. 2/3, 10-11-17-18-4.
Road north of 31/34-16-18-4.
Trunk road east of Coutts.
Road between 11/14-2-11-4.
Road between 22/27-3-12-4.
Road between 11/12-1-11-4.
Road between 26-1-11-4.
Road between 25/26-1-11-4.
Road between 10/11-1-11-4.

Trunk road south of Foremost.
Road between 15/16-11-11-4.
Road between 8/17-3-12-4.
Road bet. 15/16-1-14-4.
Road between 25/26-2-14-4.
Road between 14/15-1-14-4.
Road S.E. 11-1-14-4.
Road between 11/12-1-13-4.
Road north of 7, 9, 10, 8-1-14-4.
Road between 23/24-2-15-4.
Road between 24/15-1-13-4.
Trunk road between 28/29-2-16-4.
Road between Sec. 2, Twp. 4-17-4 and 35-3-17-4.
Road north 20, 21, 22, 26-1-17-4.
Road between 25/26, 35/36, Twp. 1-17-4.
Road between 14/15, 22/23-1-17-4 and between 34/35-1-17-4
Road east of 28/33-2-16-4.
Road north of 34 to 36-2-16-4.
Trunk road Milk River to Kippenville.
Road 9 to 16, 10 to 15-1-17-4.
Road between 8/9-1-17-4.
Road between 35/36-1-16-4.
Road north of 36-1-17-4 and 31 and 32-1-16-4.
Trunk road east of Warner.
Road south of Twps. 14, 13/14-4.
Road between 20/21-4-16-4.
Road between 17/20-4-16-4.
Road 21/28-4-15-4.
Road 16/17-20-21, Twp. 4-15-4.
Road through Sec. 30 and east to 30 and 31-4-16-4
Road between 17/18-5-12-4.

FERRIES.

The total number of Ferries operated by this Department in 1917 was 72.

There was one ferry operated by the public as follows:

On the Old Man River, north of Purple Springs.

Making 73 government owned ferries in the province.

New Ferries were built and installed on the following locations:

Over North Saskatchewan River at Fraser Landing.
 Over Saskatchewan River at Forbesville.
 Over Red Deer River, below Rosedale.
 (This ferry was completed this season but is not operating yet).
 Over Red Deer River, north of Buffalo.
 Over Red Deer River, at Niddrie's Crossing.
 Over Bow River southwest of Cluny.

New scows were built in connection with the following ferries:

Over Macleod River at Peers Crossing.
 Over North Saskatchewan River at Rocky Mountain House.
 Over Red Deer River at Iddesleigh.
 Over Pembina River at Wright's Crossing.
 Over Saskatchewan River at Heinsburg.
 Over Athabasca River at Hinton.
 Over Red Deer River at Gregory's Ford.
 Over Red Deer River at Dorothy.

The following is a complete list of Ferries in the Province at the close of the season of 1917:

Red Deer River at Prince's Ranch.
 North Saskatchewan River at Brosseau.
 North Saskatchewan River at Desjarlais.
 Athabasca River at Holmes' Crossing.
 Bow River southwest of Cluny, first ferry.
 Bow River southwest of Cluny, second ferry.
 Red Deer River, at Dorothy.
 Old Man River northeast of Pincher.
 North Saskatchewan River at Victoria.
 North Saskatchewan River at fourth meridian.
 Athabasca River at Athabasca.
 Tolman Ferry over Red Deer River.
 North Saskatchewan at Shandro.
 Pembina River at Wild Horse.
 North Saskatchewan at Hopkin's Crossing.
 Red Deer River at Fieldholm.
 North Saskatchewan at Rocky Mountain House.
 Peace River at Peace River Crossing.
 Lac St. Anne at the Narrows.
 North Saskatchewan north of Kitscoty.
 North Saskatchewan, north of Lamont.
 Pembina River at Sunniebend.
 Pembina River at Wright's Crossing.
 North Saskatchewan River at Lamora's Crossing .
 Bow River south of Strathmore.
 Peace River at Dunvegan.
 North Saskatchewan north of Manville.
 North Saskatchewan at Fraser Landing.
 Pembina River at Entwistle.
 Red Deer River at Carbon.
 Red Deer River at Steeveville.
 Bow Valley at River Bow.
 Beaver River at Cold Lake Crossing.

Old Man River North of Purple Springs.
Bow River at Rocky Butte.
Red Deer River west of Munson.
North Saskatchewan south of Tomahawk.
Red Deer River at Finnigan's Crossing.
Pembina River at Mathew's Crossing.
North Saskatchewan at Mooswa.
Pembina River at Lunnford.
Athabasca River on Edson Trail.
Baptiste River on Edson Trail.
Belly River at Grassy Lake.
Little Smoky River on Edson Trail.
Bow River at Eyremore.
Macleod River north from Thornton.
Macleod River at White Court.
Red Deer River at Iddesleigh.
Bow River at Amethyst.
Beaver River at Durlingville.
North Saskatchewan north from Bruderheim.
Pembina River at Manola.
Macleod River north of Peers.
Red Deer River north from Jenner.
Red Deer River at Gregory's Ford.
North Saskatchewan at Elk Point.
Red Deer at Emerson's Ford.
Red Deer at Empress.
Pembina River, north of Sangudo.
Red Deer River west of Morrin.
Pembina River west of Eunice.
Red Deer River north of Pancras.
Red Deer River at Mountain House.
Red Deer River north of Atlee.
North Saskatchewan River at Forbesville.
South Saskatchewan River at fourth meridian.
Macleod River north of Rosevear.
Athabasca River at Hinton.
Big Smoky River near the mouth of Wapiti River.
Peace River at Fort Vermilion.
Saskatchewan River at Heinsburg.
Red Deer River below Rosedale.
Red Deer River at Niddrie's Crossing.

SURVEYS BRANCH

Edmonton, January 28th, 1918.

THE DEPUTY MINISTER,

Department of Public Works,

Edmonton, Alberta.

SIR:—I beg to submit the following report in connection with work in the Survey's Branch for the year 1917.

On account of the urgent demand for surveys in the different Rural Municipalities and Local Improvement Districts, it was found necessary to put one additional party in the field, with the result that we have completed considerable more work than in previous years.

There are, however, a large amount of outstanding requests which we have found necessary to carry forward for our 1918 schedule.

Very few Townsite Plans have been presented for approval.

Progress in connection with the Alberta and British Columbia boundary has been satisfactory.

I append hereto a summary showing the work of this Branch during the year, also the reports of the District Surveyors and Engineers.

I have the honour to be, Sir,

Your obedient servant,

A. P. C. BELYEA,

Assistant Director of Surveys.

SUMMARY.

Surveys required and brought forward from 1916	853
Surveys asked for during 1917	913
Surveys made during 1917	719
Surveys carried over to 1918 schedule	816
Surveys made without instructions (included in above figures)	140
Miscellaneous examinations made during the season	155
Surveys cancelled during 1917	76
Plans prepared and filed in the Land Titles Office	650
Certificates of Title received for roads	466
Certificates of Title received for lands given for public purposes under Departmental Regulations regarding subdivisions	13
Certificates of Title of Public Buildings	1
Certificates of Title received for land other than surveyed roads (areas cut off by surveyed roads)	5
Transfers issued covering roads no longer required	253
Number of plans of subdivision approved during 1917	30

LEASE OF ROAD ALLOWANCES.

Number of new applications to lease road allowances	82
Number of new applications granted	35
Number of leases granted during 1917 (including free leases issued as compensation for surveyed roads)	195

EXPENDITURE OF SURVEYS BRANCH FOR THE YEAR 1917.

General expenses of surveys -----	\$79,917.56
Alberta and B. C. boundary survey -----	5,994.91
Compensation for surveyed roads -----	12,311.66
Printing -----	330.80
Survey Posts -----	1,380.14
Sundries -----	1,045.17
	\$100,980.24

INCOME OF SURVEYS BRANCH FOR 1917.

Fees received in respect to plans of subdivisions submitted -----	\$3,574.50
Rentals from road allowance leases -----	432.00
Sundry fees from sale of Maps, Diagrams, etc. -----	127.25
	\$4,133.75

Lethbridge, Dec. 15th, 1917.

L. C. CHARLESWORTH, ESQ.,

Deputy Minister of Public Works,

Edmonton, Alberta.

Sir:—I have the honour to submit the following report of the work done by myself, and party, during the year 1917:

As usual, the winter months were spent in preparing plans of surveys made during the year 1916, and on May 8th I organized my party, and started field work in Township 9-14-4. We worked east and north into Township 12-17-4, then returned southward and made surveys in Townships 7 and 9 in Ranges 16 and 17 west the 4th, thence through Warner, Milk River districts, where we turned east along the north side of Milk River, through Townships 2 and 3, Ranges 12, 13 and 14 west the 4th, then into Townships 1-10, 11 and 12-4. I had not been in this part of the District for some time, and, as considerable development has been made in the way of settlement, there was considerable work to be done. The country is cut by deep coulees and, in places, the location of roads is difficult. After finishing surveys in that corner I turned west into Township 1 Ranges 17, 18, 20 and 21 west the 4th, clearing off all surveys required, thence into Township 2/3-21/22-4, thence to Spring Coulee, Cardston, Hill Spring and into the Twin Butte District.

The season has been favorable for field work, and continued without frost until the first of December. We broke camp, on account of storm, on December 7th, were held up in Pincher Creek, on account of storm, till noon of the 10th. Storm continued up till the outfit was stored, and the horses put out to pasture, on the 15th.

Besides the regular field work of the party, I have been able to make some new surveys, and a good many checks and examinations, and, altogether, I consider the season's work to be very successful.

Below is a list of surveys, and examinations.

Respectfully submitted,

Your obedient servant,

(Sgd.) R. J. GORDON,

District Surveyor and Engineer.

DIVERSIONS.

File No.	Survey No.	Location.
19048	179-17	S. $\frac{1}{2}$ Sec. 26 & S.W. $\frac{1}{4}$ Sec. 25.9-19-4.
21500	441-17	Sec. 3-12-17-4.
18355	81-11	Sec. 12-11-17-4.
18354	82-11	Sec. 35/36-11-17-4.
19273	415-11	Sec. 6-10-17-4.
19338	467-11	Sec. 3-3-12-4.
19490	19-12	Sec. 36-17-7 & Sec. 31-7-16-4.
16138-B	201-12	N.E. $\frac{1}{4}$ Sec. 14-10-17-4.
20124	252-12	N. of Secs. 10, 11 & 12-4-30-4.
20125	537-12	Between Secs. 14, 15, 4-30-4.
22615	678-13	N.W. $\frac{1}{4}$ Sec. 24-8-1-5.
21828	434-14	N. Sec. 31-3-29-4 & N. of 35 & 36-3-30-4.
21840	494-14	Sec. 20 & 21-4-17-4.
22930	42-16	2, 11, 12, 13 & 24-1-13-4.
19101-B	23-16	6 & 7-1-12-4.
23771	784-16	Tp. 1-20/21-4.
23761	7-17	Secs. 21/27-4-17-4.
23740	18-17	Tp. 1/2-20/21-4.
23713	20-17	Sec. 26-1-11-4.
18693	151-17	S. $\frac{1}{2}$ Sec. 5-14-22-4.
21288	337-17	35/36-9-17-4 & Sec. 1-10-17-4.
24102	419-17	Sec. 5/8-2-13-4.
24178	524-17	S. $\frac{1}{2}$ Sec. 8-9-16-4.
21321-B	764-17	Secs. 36/31 & 1/6-1/2-16/17-4.
24396	765-17	Secs. 14/15-1-11-4.
24397	766-17	S $\frac{1}{2}$ Sec. 6-2-18-4.
15784-B	775-17	S.E. $\frac{1}{4}$ Sec. 5-2-25-4.
24408	781-17	Secs. 2/3-2-11-4.
24409	782-17	N.W. $\frac{1}{4}$ Sec. 9-1-10-4.
24410	783-17	S.E. $\frac{1}{4}$ Sec. 30-1-13-4.
24438	807-17	Secs. 17/18-1-21-4.
24439	808-17	Secs. 19/20-1-21-4.
24440	809-17	Secs. 14-1-22-4.
24424	850-17	W. $\frac{1}{2}$ Sec. 8-4-27-4.
23204-B	814-17	E. $\frac{1}{2}$ Sec. 28-2-16-4.
24411	784-17	Secs. 4/9-1-12-4.

NEW ROADS.

17795	897-17	N. of Sec. 25, 26-9-18-4 & Secs. 28, 29, 30-9-17-4.
21466	210-14	Through Secs. 30/31-2-21-4, Sec. 5-3-21-4 & 24-2-22-4.
23265-A	154-16	Through Secs. 25, 26, 23, 27, 21, 20-1-21-4.
24201	529-17	In Sec. 9-4-29-4.
23657	681-16	Secs. 1/2-1-11-4 & N. of Sec. 6-1-10-4.
23714	19-17	N. of 13, 14, 15-1-11-4.
16574	147-17	S. of S.W. $\frac{1}{4}$ of Sec. 21-7-1-5.
24202	530-17	On $\frac{1}{4}$ line Sec. 12-3-30-4.
24412	785-17	Sec. 16, 17, 20, 21-2-16-4.

SURVEYS CHECKED.

18125	46-10	In Sec. 36-11-30-4.
20848	178-13	In N.W. $\frac{1}{4}$ Sec. 32-2-29-4.
18710	852-14	N.W. $\frac{1}{4}$ Sec. 35-4-17-4.
14283	5-15	S.E. $\frac{1}{4}$ Sec. 6-8-2-5.
18883	88-15	S.W. $\frac{1}{4}$ Sec. 3-8-2-5.
23772	902-17	N.W. $\frac{1}{4}$ Sec. 23-4-24-4.

ROADS CHANGED.

20865	677-13	In S.W. $\frac{1}{4}$ Sec. 13-10-17-4.
14706	680-13	In Sec. 15-4-29-4.
23123	201-16	In Sec. 15-1-11-4.
14479	619-16	In Sec. 31/32-5-29-4.
14220	773-17	In N.W. $\frac{1}{4}$ Sec. 8-2-25-4.
14487-N	455-16	In Sec. 36-4-30-4.

EXAMINATIONS.

18847	73-11	In Sec. 10/15-11-15-4.
18075	80-11	1-10-15-4.

File No.	Survey No.	Location.
16101	2-15	2-5-28-4.
14487-H	94-15	9-3-29-4.
23791	17-17	31-1-12-4.
23698	294-17	N.E. $\frac{1}{4}$ Sec. 32-7-17-4.
24069	398-17	N.W. $\frac{1}{4}$ Sec. 3-11-29-4.
14612	597-17	19/29-1-26-4.
24399	768-17	C.P.R. in Sec. 36-5-21-4.
18407	774-17	In S.E. $\frac{1}{4}$ Sec. 8-2-25-4.
17546-C	458-17	In Sec. 10-4-16-4.
20156	976-14	Re-opening road through Sec. 20-2-14-4.
14487-M	898-17	Re change in W. $\frac{1}{2}$ Sec. 3-3-29-4.
20608	242-15	In N.W. $\frac{1}{4}$ Sec. 11-2-26-4.

Office of the District Surveyor and Engineer.

Calgary, December 14, 1917.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alberta.

Sir:—I have the honour to submit the following report of field work performed in the Calgary District during the season of 1917.

I organized my party at Calgary and started work on a new road west of Calgary in the Bowness Subdivision. I had intended moving west up the Elbow River to an important survey, but owing to the impassable roads in that district I moved southeast along the Bow River, making several surveys. From the Bow River south of Cluny I moved on to the southeast, completing all surveys, many of them outstanding, in that part of the country. I circled back again to the Cluny Ferry, and north to the country east of Strathmore. I then moved west through Calgary and up the Elbow River. After finishing the work in that district, I moved north through Cochrane, as far north as Elkton. From Elkton I followed the following route: Didsbury, Carstairs, Crossfield, Beiseker, Irricana, Ardenode, Strathmore, Indus to Calgary.*

On two occasions I took out fly-camps and so moved much faster and completed surveys too far away to move the main camp.

In all I moved camp approximately six hundred miles. This was necessary in order to reach some outstanding surveys. I could not reach some surveys in the N.E. and S.W. corners of my district.

I lost considerable time this year on account of rain, and in October on account of the general snow storm. The month of November was exceptionally mild and was really the best month of the season.

During the last three months I was without the services of an assistant, which, together with the shortage of labour, delayed progress to some extent.

Below is a list of surveys and examinations under the following heads: Roads, Road Diversions, Changes in Surveys, Miscellaneous and Examinations.

Your obedient servant,

W. H. YOUNG,

District Surveyor and Engineer.

ROADS.

Survey No.	File No.	Description.
361-10	14439-B	Road in S.W. $\frac{1}{4}$ Sec. 34, Tp. 31-4-5.
716-15	22805	Road on $\frac{1}{4}$ line Sec. 23, Tp. 32-2-5.
5-17	23736	Roads and Diversions in N. E. $\frac{1}{4}$ Section 12, Tp. 23-5-5, S. $\frac{1}{2}$ Sec. 1, Tp. 23-5-5, S.W. $\frac{1}{4}$ Sec. 2, Tp. 23-5-5, N. $\frac{1}{2}$ Sec. 34, Tp. 22-5-5, N.E. $\frac{1}{4}$ Sec. 36, Tp. 22-5-5.
16-17	23748	Blind line road in N. Sec. 13, Tp. 26-4-5.
112-17	23893	Road through Bowness in Secs. 32, 33, 34.
137-17	23854	Road in Secs. 2, 3, 10, 11 & 12, Tp. 17-21-4.
211-17	23882	Road in Sec. 24, Tp. 7-7-4.
609-17	22477-B	Blind line into Traveis in N. Sec. 5 and 6, Tp. 15-19-4, and N. Secs. 1, 2, 3, 4, 5 and 6, Tp. 15-20-4.
899-17	16475	Road in Lot 28, Parcel D, Grasswold Subdivision in Tp. 27-22-4.
879-17	16331	Road across S.W. $\frac{1}{4}$ Sec. 27, Tp. 28-27-4.

ROAD DIVERSIONS

391-11	19209	Diversion in N.E. $\frac{1}{4}$ Sec. 7 and N.W. $\frac{1}{4}$ Sec. 8, Tp. 17-17-4.
480-15	20404	Diversion in Secs. 28 and 29, Tp. 21-27-4.
33-13	20665	Diversion in N.E. $\frac{1}{4}$ Sec. 35, Tp. 17-18-4.
418-13	21128	Diversion in N.E. $\frac{1}{4}$ Sec. 29, Tp. 16-21-4.
450-13	20715	Diversion in Sec. 14, Tp. 22-25-4.
672-14	22040	Diversion in N.W. $\frac{1}{4}$ Sec. 24, Tp. 29-28-4.
854-14	22126	Diversion in S.E. $\frac{1}{4}$ Sec. 13, Tp. 31-1-5.
856-14	22124	Diversion in W. $\frac{1}{2}$ Sec. 29, Tp. 32-28-4.
712-15	19429	Diversion in N.E. $\frac{1}{4}$ Sec. 18, Tp. 31-4-5.
713-15	22919	Diversion in N.E. $\frac{1}{4}$ Sec. 12, Tp. 31-4-5.
714-15	22920	Diversion in S.E. $\frac{1}{4}$ Sec. 18, Tp. 31-2-5.
717-15	22890	Diversion in N.E. $\frac{1}{4}$ Sec. 15, Tp. 25-26-4.
864-15	23011	Diversion in W. Sec. 19, Tp. 21-26-4, and Sec. 24, Tp. 21-27-4.
279-16	23353	Diversion in N.W. $\frac{1}{4}$ Sec. 25, Tp. 16-20-4.
280-16	23352	Diversion in W. $\frac{1}{2}$ Sec. 16 and N.W. $\frac{1}{4}$ Sec. 9, Tp. 17-19-4.
585-16	23361	Diversion in S.W. Sec. 18, Tp. 25-24-4.
40-17	23775	Diversion in N.E. $\frac{1}{4}$ Sec. 2, Tp. 28-26-4.
138-17	23855	Diversion in N.E. Sec. 36, Tp. 17-24-4 and N.W. Sec. 31, N.W. Sec. 32, Tp. 17-13-4.
163-17	23890	Diversions in Secs. 34, 35 and 27, Tp. 19-20-4 and in Secs. 2 and 3, Tp. 20-20-4.
195-17	23959	Diversion in S.E. Sec. 34, Tp. 19-22-4.
260-17	23965	Diversion in S.E. Sec. 36, Tp. 17-19-4.
491-17	24175	Diversion in N.E. $\frac{1}{4}$ Sec. 2, Tp. 31-4-5.
494-17	24179	Diversion in W. $\frac{1}{2}$ Sec. 9, Tp. 17-23-4.
495-17	24180	Diversion in S.E. Sec. 16, Tp. 17-23-4.
550-17	24247	Diversion in Sec. 12, Tp. 17-20-4, and in Secs. 7 and 18, Tp. 17-19-4.
553-17	24246	Diversion in N.W. Sec. 33, Tp. 19-20-4.
554-17	24245	Diversion in S.E. Sec. 19, Tp. 17-19-4.
555-17	24242	Diversion in Secs. 35, 10 and 11, Tp. 18-20-4.
556-17	24243	Diversion in S.W. Sec. 10, and N.W. Sec. 3, Tp. 19-20-4.
557-17	24251	Diversion in Secs. 3 and 4, Tp. 17-20-4.
585-17	24305	Diversion in Secs. 11, 14 and 13, Tp. 18-23-4.
594-17	24303	Diversion in S.E. Sec. 13, Tp. 22-21-4.
595-17	24304	Diversion in N.W. Sec. 9, Tp. 18-23-4.
596-17	24306	Diversion in E. $\frac{1}{2}$ Sec. 15, Tp. 18-23-4.
618-17	24229	Diversion in N. $\frac{1}{2}$ Sec. 20, Tp. 26-26-4.
619-17	24230	Diversion in S.W. $\frac{1}{4}$ Sec. 17, Tp. 26-26-4.
620-17	24231	Diversion in S. $\frac{1}{2}$ Sec. 15, Tp. 26-26-4.
621-17	24232	Diversion in S.W. Sec. 6, Tp. 26-25-4.
622-17	24233	Diversion in E. $\frac{1}{2}$ Sec. 31, Tp. 25-25-4.
623-17	24234	Diversion in N.E. $\frac{1}{4}$ Sec. 19 and S.W. $\frac{1}{4}$ Sec. 30, Tp. 25-25-4.
624-17	24235	Diversion in N.W. $\frac{1}{4}$ Sec. 20, Tp. 25-25-4.
625-17	24236	Diversion in N.W. $\frac{1}{4}$ Sec. 34, Tp. 25-25-4.
628-17	24239	Diversion in N.E. $\frac{1}{4}$ Sec. 32, Tp. 25-25-4, and in S.W. $\frac{1}{4}$ Sec. 4, Tp. 26-25-4.
872-17	24480	Diversions in Secs. 7, 8 and 17, Tp. 28-3-5, to two bridges.
873-17	24479	Diversion in S. $\frac{1}{2}$ Sec. 17, Tp. 26-26-4.

Survey No.	File No.	Description
874-17	24478	Diversion in N.W. $\frac{1}{4}$ Sec. 17, Tp. 26-26-4.
875-17	24477	Diversion in N.E. $\frac{1}{4}$ Sec. 32, Tp. 24-25-4.
876-17	24476	Diversion in S.W. $\frac{1}{4}$ Sec. 3, Tp. 25-25-4.
877-17	24475	Diversion in N.E. $\frac{1}{4}$ Sec. 7, Tp. 25-25-4.
52-17	23806	Diversion in N.E. $\frac{1}{4}$ Sec. 8, Tp. 28-26-4.
496-17	24181	Diversion in S.W. $\frac{1}{4}$ Sec. 33, Tp. 18-23-4.
904-17	24495	Diversion in S.W. $\frac{1}{4}$ Sec. 6, Tp. 26-25-4.

EXAMINATIONS

66-16	23158	Examination of road in E. Sec. 7, Tp. 17-20-4.
456-16	16447	Examination of surveyed road in Sec. 5, Tp. 25-33-4.
11-17	23312	Examination of road in N.W. Sec. 20, Tp. 22-24-4.
38-17	23773	Examination of road in N. Sec. 10, Tp. 28-26-4.
51-17	23805	Examination of road between Secs. 29/30, Tp. 28-26-4.
180-17	23873	Examination of $\frac{1}{4}$ line in Secs. 35/36, Tp. 29-5-5.
578-17	14727	Examination of blind line road in N. Sec. 13, 14 and 15, Tp. 27-26-4.
617-17	24228	Examination of road allowance in E. Sec. 1, Tp. 26-27-4.
626-17	24237	Examination of road allowance bet. Secs. 3/4, Tp. 26-25-4.
627-17	24238	Examination re. diversion between Secs. 9/16, Tp. 26-25-4.
752-17	23250	Examination of road into Indus. in Sec. 35, Tp. 22-28-4.
35-14	14768	Examination of blind line in N. Sec. 5, Tp. 24-28-4.
901-17	14285	Examination in Holmpatrick subdivision in Sec. 12, Tp. 24-1-5.
900-17	18100-B	Examination of road allowance in Bar S. Ranch in Tp. 16-1-5.
882-17	24167	Examination re. leasing of road allowance in Secs. 32, 27, 34, Tp. 27-21-4, and E. Sec. 3 and 10, Tp. 28-21-4.
58-17	23831	Examination of road to Bridges South of Cluny in Tps. 20/21-21-4.
735-17	15505	Examination of road to steel bridge on Blackfoot Indian Reserve south of Gleichen in Tps. 21/22-23-4.

CHANGE IN SURVEY

906-17	14550	Change in survey in Morley Trail in Sec. 11, Tp. 26-4-5.
700-16	14577	Change in survey in W. $\frac{1}{2}$ Sec. 2, Tp. 28-4-5, and in N.E. Sec. 34, Tp. 27-4-5.
552-17	22645	Change in survey in Secs. 28 and 33, Tp. 20-23-4.
883-17	22261-B	Change in survey of road to new bridge in S.W. $\frac{1}{4}$ Sec. 12, Tp. 23-5-5.
880-17	23035	Change in survey of diversion in N.E. $\frac{1}{4}$ Sec. 11, Tp. 19-20-4.
881-17	23007	Change in survey of diversion in N.E. $\frac{1}{4}$ Sec. 24, Tp. 19-20-4.

MISCELLANEOUS.

560-17	10287	Levels re drainage of slough bet. Secs. 32/33, Tp. 27-28-4.
562-17	6045	Levels re drainage of slough in Sec. 35, Tp. 25-1-5.
559-17	10285	Levels re drainage of slough in Sec. 33, Tp. 25-1-5.
536-16	25009-B	Retracement and angles in N. Sec. 24, Tp. 30-2-5.
9-17	23746	Survey of lot for telephone office at Carstairs in Sec. 17, Tp. 30-1-5.
378-17	23884	Survey of Agricultural Grounds at Bowden in Sec. 23, Tp. 34-1-5.
60-17	23796	Survey of well site at Champion in N.W. $\frac{1}{4}$ Sec. 6, Tp. 15-23-4.
139-17	19226	Staking out grades in Sec. 5, Tp. 28-1-5.
299-17	21073-B	Examination of contours in Sec. 15, Tp. 16-21-4.
563-17	14577	Retracement of surveyed road in N.W. Sec. 11, Tp. 28-4-5.

Vegreville, Alta., Dec. 31, 1917.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alberta.

Sir:—I have the honour to submit the following report of the surveys made, and the other engineering work done in the Districts of Vegreville, Vermilion, Wainwright, Sedgewick, Stettler, Coronation and Ribstone during the past season.

The first part of the year was spent in preparing and completing the returns of the previous season's work.

On April 28th I organized my party at Vegreville, and worked southerly through the western part of my District. I then worked easterly along the southern part of my district to the east side of the Province. From here I worked northwesterly through the unorganized territory in the Districts of Ribstone and Coronation, doing all the work for which I had instructions, and all other work while in the locality. By this time cold weather was setting in, and in order to hold my party I decided to move into the timbered country tributary to the main line of the Canadian Northern Railway, so I worked northwesterly from Hughenden across country to Innisfree and closed up the season's field operations at Ranfurly on Dec. 3rd.

Owing to the greatly increased area of land under cultivation, and the fact that the old trails in the newer settled districts are being closed, there no doubt will be a great demand for road improvements another year.

The season was well adapted for field work, and the fact that I was able to hold a full crew or replace vacancies in my party enabled me to complete the work over a large portion of my district.

The work of the past season consists of the surveying of new roads, road diversions, drains, examinations, reports and cost estimates.

The following is a list of the various work done:

NEW ROADS		
Survey No.	File No.	Location
875-15	21898	New Road in Sec. 33-37-7-4.
59-16	23125	New Road in Secs. 3 and 4-42-15-4.
60-16	23133	New Road in Secs. 3, 4, 9 and 10-36-7-4.
84-16	22661	New Road in Sec. 7-39-14-4.
95-16	23194	New Road in Sec. 7-41-12-4.
160-16	23249	New Road in Secs. 3, 4 and 10-40-13-4, and in Sec. 33-39-13-4.
180-16	22846-B	New Road in Secs. 27 and 34-36-5-4.
293-16	23359	New Road in Secs. 8, 9, 16, 22 and 27-37-9-4.
439-16	23481	New Road in Secs. 24, 34, 35 and 36-45-10-4.
451-16	22459-B	New Road in Secs. 27, 29 and 32-40-10-4.
701-16	23603	New Road in Secs. 1 and 12-40-8-4.
28-17	23717	New Road in Sec. 36-47-13-4.
46-17	15776	New Road in Secs. 28 and 33-43-11-4.
132-17	23865	New Road in Secs. 16 and 21-40-10-4.
153-17	23861	New Road in Secs. 17, 18, 19 and 20-37-5-4, and in Secs. 13, 14, 15, 22, 23 and 24-37-5-4.
184-17	23787	New Road in Sec. 26-52-13-4.

File No.	Survey No.	Location.
189-17	22630	New Road in Sec. 31-38-15-4, and diversion in Secs. 7, 8 and 18, Tp. 39-15-4.
259-17	23971	New Road in Sec. 34-37-14-4.
302-17	24001	New Road in Secs. 30 and 31-34-6-4.
312-17	24012	New Road in Sec. 11-50-11-4.
371-17	24060	New Road in Secs. 17, 18, 19 and 20-35-6-4.
544-17	24220	New Road in Sec. 15-37-10-4.
733-17	24366	New Road in Sec. 31-51-11-4.
871-17	15421-B	New Road in Sec. 2-51-11-4.

ROAD DIVERSIONS

517-12	20482	Diversion in Secs. 27, 34 and 35-33-6-4.
190-13	20834	Diversion west of Sec. 4-38-13-4.
724-14	22058	Diversion north of Sec. 20-33-3-4, and west of Sec. 22-33-3-4, and west of Secs. 10 and 15-33-3-4, and in Secs. 17, 20 and 21-33-3-4, and across Sec. 21-33-3-4.
903-14	19229-B	Diversion west of Sec. 34-37-17-4.
139-15	23995	Diversion west of Sec. 30-46-11-4, and east of Sec. 25-46-12-4
594-15	22790	Diversion west of Sec. 5-49-8-4. (Pits to dig).
768-15	22929	Diversion south of Sec. 18-35-3-4.
772-15	22766	Diversion west of Secs. 22 and 27-39-11-4.
790-15	22864	Diversion north of Sec. 21-37-13-4, and north of Sec. 22-37-13-4.
791-15	22863	Diversion east of Sec. 22-36-6-4.
851-15	22913	Diversion west of Sec. 30-37-12-4.
852-15	23012	Diversion in Secs. 3 and 4-37-9-4, and in Secs. 9 and 10-37-9-4.
854-15	23044	Diversion east of Secs. 1 and 12-33-5-4.
855-15	23075	Divisions in Secs. 1, 2, 11 and 12-39-15-4.
872-15	23083	Diversion in Sec. 35-37-14-4.
10-16	20806-B	Diversion south of Secs. 29 and 30-34-17-4.
27-16	22992	Diversion north of Sec. 29-35-14-4.
58-16	23126	Diversion south of Sec. 26-41-14-4.
118-16	23220	Diversion in Secs. 23 and 24-34-3-4, east of Secs. 23 and 26-34-3-4, east of Secs. 26 and 35-34-3-4, east of Sec. 2-35-34-4, west of Secs. 1 and 12-35-3-4, in Secs. 11 and 12-35-3-4, west off Sec. 13-35-3-4, west of Sec. 24-35-3-4, in Secs. 23, 24, 25 and 26-35-3-4, across Sec. 26-35-3-4, and west of Sec. 35-35-3-4.
143-16	23252	Diversion west of Sec. 28-49-10-4.
180-16	22846	Diversion in Secs. 22 and 27-36-5-4, in Secs. 33 and 34-36-5-4, in Secs. 3 and 4-37-5-4, east of Sec. 9-37-5-4, west of Secs. 10 and 15-37-5-4, west of north west $\frac{1}{4}$ of Sec. 15-37-5-4.
221-16	18699	Diversion south of Sec. 23-38-11-4, and north of Sec. 14-38-11-4.
234-16	23320	Diversion south of Secs. 2 and 3-35-13-4.
291-16	23364	Diversion east of Sec. 14-39-14-4.
292-16	23366	Diversion north of Sec. 7-40-14-4, and Sec. 12-40-15-4.
294-16	23357	Diversion south of Secs. 10 and 11-38-12-4.
295-16	23358	Diversion south of Secs. 27 and 28-35-10-4.
311-16	23381	Diversion east of Secs. 1 and 12-37-9-4, and west of Sec. 6-37-8-4.
434-16	23455	Diversion east of Secs. 6 and 7-35-4-4.
345-16	23453	Diversion south of Sec. 16-36-4-4.
438-16	23486	Diversion west of Secs. 18 and 19-45-12-4.
442-16	23485	Diversion north of Sec. 7-45-11-4.
446-16	23480	Diversion into Secs. 23, 24 and 29-32-11-4.
447-16	23479	Diversion west of Secs. 3 and 10-32-10-4.
448-16	23211	Diversion east of Sec. 28-40-11-4.
450-16	23209	Diversion west of Sec. 35-40-10-4 (2 Divs.) and Diversion east of Sec. 3-41-10-4.
452-16	23216	Diversion east of Sec. 10-41-10-4, and north of Sec. 11-41-10-4.
453-16	23454	Diversion in Secs. 20 and 29-35-4-4.
468-16	23498	Diversion east of 34-38-7-4.

DEPARTMENT OF PUBLIC WORKS

Survey No.	File No.	Location
474-16	20075-B	} Diversion north of Southeast $\frac{1}{4}$ of Sec. 12-52-11-4.
474-16	20075-B	
469-16	23499	Diversion west of Sec. 15-38-7-5, and east of Sec. 16-38-7-4.
529-16	23523	Diversion into Secs. 7 and 18-35-16-4, north of Sec. 8-35-16-4, and south of Secs. 16 and 17-35-16-4.
565-16	23568	Diversion west of Sec. 21-36-4-4.
588-16	23587	Diversion into Secs. 23 and 24-37-13-4.
614-16	23583	Diversion east of Sec. 35-51-13-4.
632-16	23621	Diversion north of Sec. 24-34-9-4.
653-16	23637	Diversion west of Sec. 22-40-10-4.
680-16	18894-B	Diversion in Sec. 34-29-8-4, and Sec. 3-40-8-4.
796-15	22870	Diversion east of Sec. 2-45-12-4.
26-17	23788	Diversion west of Sec. 30-48-10-4.
27-17	23789	Diversion east of Sec. 23-48-11-4, and north of Sec. 24-48-11-4.
29-17	23724	Diversions south and east of Sec. 4-47-11-4.
30-17	23725	Diversion south of Sec. 13-47-10-4, and south of Sec. 18-47-9-4.
43-17	23769	Diversion west of Sec. 4-35-7-4.
61-17	23825	Diversion east of Sec. 26-42-12-4.
118-17	23839	Diversion north of Sec. 9-50-9-4.
119-17	23840	Diversion west of Sec. 21-50-9-4.
131-17	23864	Diversion east of Secs. 21 and 28-40-10-4.
166-17	23853	Diversion into Secs. 20, 21, 27 and 28-39-7-4.
167-16	23892	Diversion into Secs. 9, 10, 17 and 18-39-7-4.
178-17	23874	Diversion into Secs. 16 and 21-40-8-4.
188-17	23915	Diversion west of Sec. 27-37-15-4.
240-17	23953	Diversion north of Sec. 7-38-16-4.
244-17	23955	Diversion south of Secs. 3 and 4-51-13-4.
246-17	23904	Diversion north of Sec. 23-38-13-4.
253-17	23959	Diversion south of Sec. 25-50-13-4.
262-17	23967	Diversion north of Sec. 31-39-13-4.
284-17	18442	Diversion into Secs. 19, 29 and 30-49-11-4.
288-17	23996	Diversion south of Sec. 13-49-11-4.
308-17	24008	Diversion east of Sec. 13-35-5-4, west of Secs. 19 and 30-35-4-4, west of Sec. 31-35-4-4, west of Sec. 7, 36-4-4, east of Sec. 12-36-5-4, west of Sec. 18-36-4-4, east of Sec. 24-36-5-4, west of Sec. 19-36-4-4.
309-17	24009	Diversion west of Sec. 11-51-11-4.
310-17	24010	Diversion west of Sec. 23-52-11-4.
313-17	24013	Diversion south of Sec. 25-52-12-4.
314-17	24014	Diversion east of Sec. 25-52-12-4, and west of Secs. 30 and 31-52-11-4.
316-17	24033	Diversion east of Sec. 24-21-12-4, west of Sec. 30-51-11-4, and west of Sec. 19-51-11-4, and east of Secs. 24 and 25-51-12-4.
328-17	24016	Diversion east of Secs. 17 and 20-33-8-4.
329-17	24017	Diversion west of Secs. 30 and 31-34-8-4.
331-17	24031	Diversion east of Secs. 7 and 8-40-12-4.
359-17	24059	Diversion east of Sec. 17-36-14-4.
376-17	24062	Diversion north of Sec. 32-37-12-4.
392-17	24085	Diversion east of Sec. 35-52-12-4 (3 Divs.), west of Secs. 25 and 36-52-12-4, and east of Sec. 26-52-12-4 (2 Divs.).
411-17	24104	Diversion east of Sec. 35-39-14-4.
434-17	24116	Diversion west of Sec. 32-35-12-4.
436-17	24124	Diversion south of Sec. 6-51-15-4.
451-17	24160	Diversion west of Sec. 19-41-13-4.
480-17	24163	Diversion east of Sec. 28-36-14-4.
489-17	24185	Diversion west of Sec. 23-33-9-4.
523-17	23064	Diversion south of Sec. 29-39-15-4.
606-17	24343	Diversion north of Sec. 34-36-9-4, and south of Sec. 3-37-9-4.
644-17	24300	Diversion west of Sec. 34-32-4-4, and west of Sec. 3-33-4-4.
646-17	21198-B	Diversion east of Sec. 10-47-11-4.
648-17	24290	Diversion north of Sec. 12-47-10-4.

Survey No.	File No.	Location
649-17	24291	Diversion east of Sec. 23-47-11-4.
662-17	21848-B	Diversion east of Sec. 23-47-10-4.
663-17	24298	Diversion west of Sec. 10-47-10-4.
711-17	24355	Diversions south of Sec. 17-35-7-4, and into Secs. 18 and 7-35-7-4, north of Sec. 7-35-7-4, south of Secs. 13 and 14-35-8-4, and in Sec. 12-35-8-4.
712-17	24356	Diversions into Secs. 4 and 5-36-4-4.
729-17	24362	Diversions south of Sec. 28-52-11-4. (2 Divs.).
730-17	24363	Diversion east of Sec. 36-50-13-4.
776-17	15392-C	Diversion south of Section 31-47-11-4, and east of Sec. 36-47-12-4.
792-17	24420	Diversion east of Sec. 11-34-3-4.
793-17	24421	Diversion south of Secs. 15-34-2-4.
794-17	24422	Diversion south of Secs. 18-34-2-4.
739-17	24382	Diversion north of Secs. 8 and 9-35-4-4.
795-17	24423	Diversion east of Sec. 19-36-5-4.

EXAMINATIONS, Etc.

516-12	20483	Examination and report found road between Secs. 2 and 3-34-6-4 is graded.
598-13	18178	Examination and report survey in Secs. 9 and 16-37-17-4 not wanted.
395-15	22741	Examination and report road north of Sec. 34-52-11-4 better be worked.
762-15	22855	Examination and report road in S.W. ¼ of Sec. 6-39-11-4 best to improve old survey.
849-15	23029	Examination and report road south of Sec. 30-39-8-4 want to examine this location with road foreman.
61-16	23141	Examination and report found road surveyed through Sec. 15-40-13-4.
96-16	23195	Examination and report road east of Sec. 16-41-12-4 can be graded.
144-16	23251	Examination and report south of Sec. 13-49-11-4 no survey required.
34-17	21400	Examination and report Canadian Pacific Railway diversion in Sec. 23-38-12-4 is satisfactory.
35-17	21403	Examination and report Canadian Pacific Railway diversion in Sec. 10-39-12-4 is satisfactory.
36-17	21405	Examination and report Canadian Pacific Railway diversion in Sec. 1-39-12-4 is satisfactory.
113-17	15563	Examination and report re-railway crossing in Sec. 28-42-9-4.
154-17	20778	Examination and report road in Secs. 2 and 11-37-6-4 is feasible but too expensive.
243-17	21232	Examination and report re. diversion across Secs. 18 and 19-50-8-4.
249-17	23957	Examination and report improvements south of Sec 2-51-11-4 follows old survey.
289-17	23997	Examination and report re. road east of Secs. 20 and 29-49-11-4.
650-17	24296	Examination and report survey asked for across Sec. 34-32-1-4 is to be cancelled.

DRAINS

162-16	23248	Survey examination and report re. drain in Sec. 29-39-13-4.
316-16	23382	Survey examination and report re. drain south of Sec. 29-37-15-4.
421-16	19621	Survey examination and report re. drain in Sec. 5-45-12-4.
342-17	19699	Survey examination and report re. drain in Sec. 20-42-14-4.
433-17	19698	Survey examination and report re. drain in Sec. 33-34-7-4.

OTHER WORK

Survey No.	File No.	Location.
911-17	20476	Examination and report re. bridge location north of Secs. 34 and 35-34-5-4.
198-16	22754	Checked survey in Sec. 25-39-12-4.
199-16	22846	Checked survey in Secs. 6, 7 and 18-36-5-4.

Progress reports and sketches were forwarded to the Department at the time the surveys and examinations were made.

A number of plans and final returns have already been forwarded to the Department, the remainder are now in course of preparation.

Your obedient servant,

LENNOX T. BRAY,

District Surveyor and Engineer.

Calgary, December 31st, 1917.

L. C. CHARLESWORTH, ESQ., -

Director of Surveys,

Edmonton, Alberta.

Sir:—I have the honour to submit the following report showing the different surveys made in the District of Medicine Hat during the season of 1917.

I organized my party at Medicine Hat on April 28th and after making one survey in Redcliff, I moved north of the Red Deer River, where I worked for the balance of the season. I visited the municipalities of Acadia, Cereal, Collholme, Sounding Creek, Bertawan, Golden Centre, Dowling Lake, Lambton, Hand Hills and Flowerdale in succession and Collholme a second time.

On December 2nd real winter set in and on the next day I moved to Youngstown and disbanded my party.

The weather, with the exception of the last two weeks in October, was favourable for work.

Following is a list of the works done.

Your obedient servant,

GEORGE McMILLAN,

District Surveyor and Engineer.

DIVERSIONS.

Survey No.	File No.	Description.
595-15	22819	S.E. $\frac{1}{4}$ Sec. 1, Tp. 33-17-4.
62-16	23110	N.E. $\frac{1}{4}$ Sec. 33, Tp. 28-7-4.
120-16	21866	Between Secs. 32 & 33, Tp. 31-14-4 between Secs. 4 & 5, 8 & 9, 16 & 17, 20 & 21, 28 & 29, 32 & 33, Tp. 32-14-4 and between Secs. 4 & 5, 8 & 9, Tp. 33-14-4.
298-16	23367	N.W. $\frac{1}{4}$ Sec. 17, Tp. 28-11-4.
481-16	23507	Sections 22 & 23, Tp. 28-4-4.
482-16	23497	S.W. $\frac{1}{4}$ Sec. 29, Tp. 27-5-4.
571-16	23998	S.W. $\frac{1}{4}$ Sec. 15, Tp. 29-9-4.

Survey No.	File No.	Description
252-17	21652-B	S.W. $\frac{1}{4}$ Sec. 31; N.W. $\frac{1}{4}$ Sec. 30, Tp. 30-15-4.
254-17	23960	N.W. $\frac{1}{4}$ Sec. 4 and S.W. $\frac{1}{4}$ Sec. 9, Tp. 29-9-4.
255-17	23961	N.W. $\frac{1}{4}$ Section 31, Tp. 29-8-4.
256-17	23962	S.E. $\frac{1}{4}$ Sec. 26, Tp. 29-9-4.
257-17	23963	S.W. $\frac{1}{4}$ Sec. 16, Tp. 30-9-4.
261-17	23966	S.E. $\frac{1}{4}$ Sec. 28, N.E. $\frac{1}{4}$ Sec. 21 & N.W. $\frac{1}{4}$ Sec. 15, Tp. 27-4-4.
267-17	23999	S.W. $\frac{1}{4}$ & N.W. $\frac{1}{4}$ Sec. 13, Tp. 30-8-4.
320-17	24023	S.E. $\frac{1}{4}$ Sec. 1, N.E. $\frac{1}{4}$ Sec. 1 & S.E. $\frac{1}{4}$ Sec. 12, Tp. 29-6-4; N.W. $\frac{1}{4}$ Sec. 18, N.W. $\frac{1}{4}$ Sec. 31, Tp. 29-5-4 & N.E. $\frac{1}{4}$ Sec. 24, Tp. 29-6-4.
321-17	24024	N.E. $\frac{1}{4}$ Sec. 26, Tp. 29-6-4.
322-17	24025	N.E. $\frac{1}{4}$ Sec. 23, Tp. 29-6-4.
326-17	24029	N.W. $\frac{1}{4}$ Sec. 19, Tp. 31-5-4.
386-17	24067	N.W. $\frac{1}{4}$ Sec. 27, Tp. 29-5-4.
400-17	22080-B	N.E. $\frac{1}{4}$ Sec. 33, Tp. 27-1-4.
402-17	24090	Sec. 34, Tp. 27-1-4.
403-17	24091	S.W. $\frac{1}{4}$ Sec. 28, Tp. 27-1-4.
413-17	24100	N.E. $\frac{1}{4}$ Sec. 24, Tp. 27-2-4.
453-17	24098	N.W. $\frac{1}{4}$ Sec. 6, Tp. 28-1-4.
454-17	24099	S.W. $\frac{1}{4}$ Sec. 15, Tp. 28-2-4.
455-17	24105	N.E. $\frac{1}{4}$ Sec. 33, Tp. 28-3-4.
456-17	24106	N.W. $\frac{1}{4}$ Sec. 10, Tp. 29-3-4.
477-17	24157	S.W. $\frac{1}{4}$ Sec. 15, Tp. 33-17-4.
673-17	24313	S.W. $\frac{1}{4}$ Sec. 29, Tp. 31-14-4.
674-17	24314	N.E. $\frac{1}{4}$ Sec. 17, Tp. 31-14-4.
675-17	24315	S.W. $\frac{1}{4}$ Sec. 16, Tp. 31-14-4.
677-17	24317	S.W. $\frac{1}{4}$ Sec. 11, Tp. 32-14-4.
678-17	20540	N.E. $\frac{1}{4}$ Sec. 31, Tp. 31-14-4.
679-17	24332	S.W. $\frac{1}{4}$ Sec. 1 & E. $\frac{1}{2}$ Sec. 11, Tp. 32-14-4.
680-17	24333	N.E. $\frac{1}{4}$ Sec. 4 & S.W. $\frac{1}{4}$ Sec. 3, Tp. 32-14-4.
681-17	24334	S.W. $\frac{1}{4}$ Sec. 15, N.W. $\frac{1}{4}$ Sec. 10, E. $\frac{1}{2}$ Sec. 9, Tp. 32-14-4.
682-17	24342	W. $\frac{1}{2}$ Sec. 4, Tp. 32-14-4.
683-17	24341	E. $\frac{1}{2}$ Sec. 6, S.W. $\frac{1}{4}$ Sec. 5, W. $\frac{1}{2}$ Sec. 8, Tp. 32-14-4.
750-17	24389	S.W. $\frac{1}{4}$ Sec. 29, Tp. 32-14-4.
754-17	24394	S.W. $\frac{1}{4}$ Sec. 7, Tp. 33-14-4.
769-17	24403	N.W. $\frac{1}{4}$ Sec. 18, S.W. $\frac{1}{4}$ Sec. 19, Tp. 32-13-4.
770-17	24404	N.W. $\frac{1}{4}$ Sec. 33, Tp. 32-15-4.
771-17	24405	S.E. $\frac{1}{4}$ Sec. 25, Tp. 32-15-4.
772-17	24406	N. $\frac{1}{2}$ Sec. 32, Tp. 32-14-4.
788-17	24415	S.E. $\frac{1}{4}$ Sec. 27, Tp. 32-15-4.
789-17	24416	S.W. $\frac{1}{4}$ Sec. 28, N.E. $\frac{1}{4}$ Sec. 28, Tp. 32-15-4.
790-17	24417	S. $\frac{1}{2}$ Sec. 1, Tp. 33-15-4.
791-17	24418	N.E. $\frac{1}{4}$ Sec. 18, S.E. $\frac{1}{4}$ Sec. 19, S.W. $\frac{1}{4}$ Sec. 20, Tp. 32-14-4.
842-17	24458	S.W. $\frac{1}{4}$ Sec. 3, Tp. 32-18-4.
843-17	24459	W. $\frac{1}{2}$ Sec. 9, Tp. 31-16-4.
851-17	24463	N.W. $\frac{1}{4}$ Sec. 24, Tp. 14-6-4.
858-17	24468	Secs. 20 & 21, Tp. 30-16-4.
863-17	24471	N.E. $\frac{1}{4}$ Sec. 11, S.E. $\frac{1}{4}$ Sec. 14, Tp. 30-16-4.
569-12	20531	N.W. $\frac{1}{4}$ Sec. 31, Tp. 30-14-4.
908-17	22013-B	S.W. $\frac{1}{4}$ Sec. 29, Tp. 30-16-4.
909-17	22550-B	N.E. $\frac{1}{4}$ Sec. 21, Tp. 30-16-4.
907-17	22437	N. $\frac{1}{2}$ Sec. 32, Tp. 28-15-4.
629-16	23618	W. $\frac{1}{2}$ Sec. 26, Tp. 28-14-4; N.E. $\frac{1}{4}$ Sec. 22, Tp. 28-14-4.
629-14	22014	S. $\frac{1}{2}$ Sec. 1, Tp. 27-14-4.

NEW ROADS.

227-13	20830	Secs. 27 & 34, Tp. 25-3-4.
311-16	22312-B	N. $\frac{1}{2}$ Secs. 1 & 2, Tp. 31-18-4 & Sec. 6, Tp. 31-17-4.
312-16	23114	N. $\frac{1}{2}$ Secs. 2 & 3, Tp. 31-17-4.
430-16	23477	Secs. 29, 20 & 17, Tp. 26-9-4.
527-16	22440	N. $\frac{1}{2}$ Sec. 30, Tp. 28-14-4.
296-17	24003	Secs. 28 & 33, Tp. 27-5-4 (abandoned).
372-17	18946	Secs. 2, 1 & 12, Tp. 28-1-4.
401-17	24089	Secs. 27 & 34 and 28 & 33, Tp. 27-1-4.
404-17	24092	N.E. $\frac{1}{4}$ Sec. 24, Tp. 28-1-4.
405-17	24093	N. $\frac{1}{2}$ Sec. 14, Tp. 28-1-4.
418-17	24087	Secs. 25 & 36, Tp. 27-1-4.
474-17	24154	E. $\frac{1}{2}$ Sec. 29, S.E. $\frac{1}{4}$ Sec. 32, Tp. 33-16-4.

Survey No.	File No.	Description.
475-17	24155	Secs. 34, 27, 22 & 15, Tp. 33-16-4.
476-17	24156	E. $\frac{1}{2}$ Sec. 6, Tp. 33-17-4.
479-17	24164	Sec. 11, Tp. 33-16-4.
593-17	24108	Secs. 34, 35 & 2, Tp. 27-3-4 & Sec. 1, Tp. 28-3-4.
518-17	24211	Sec. 36, Tp. 30-6-4 & Sec. 31, Tp. 30-5-4 (abandoned).
676-17	24316	S.W. $\frac{1}{4}$ Sec. 35, W. $\frac{1}{2}$ Sec. 26, Tp. 31-14-4.
751-17	24390	N. $\frac{1}{2}$ Sec. 35, N.W. $\frac{1}{4}$ Sec. 36, Tp. 32-14-4 & S.W. $\frac{1}{4}$ Sec. 2, Tp. 33-14-4.
862-17	24470	S. $\frac{1}{2}$ Sec. 29, N. $\frac{1}{2}$ Sec. 19, Tp. 30-15-4.
841-17	24457	S.E. $\frac{1}{4}$ Sec. 3, Tp. 31-16-4.
844-17	24460	N.E. $\frac{1}{4}$ Sec. 5 and E. $\frac{1}{2}$ Sec. 8, Tp. 31-17-4.
856-17	22311	Sec. 20, Tp. 31-16-4.
857-17	24469	S.W. $\frac{1}{4}$ Sec. 30, Tp. 30-16-4 & S.E. $\frac{1}{4}$ Sec. 25, Tp. 30-17-4.
913-17	23291	Sec. 33, Tp. 29-9-4.
452-17	24161	Sec. 34, Tp. 27-4-4.
517-17	24212	Sections 15, 16 and 17, Tp. 30-5-4.
910-17	20364-B	Secs. 9 & 4, Tp. 29-14-4.

EXAMINATIONS.

629-14	22014	West boundary of Sec. 36, Tp. 26-14-4.
699-15	22983	East Secs. 30 & 31, Tp. 26-14-4.
770-15	22935	W. $\frac{1}{2}$ Sec. 31, Tp. 31-16-4.
623-16	25009-B	N.E. Corner Sec. 35, Tp. 26-14-4.
631-16	23620	Sec. 9 & 10, Tp. 26-14-4.
643-16	14067-4	Secs. 3 & 4, Tp. 28-4-4.
644-16	23623	Secs. 2, Tp. 28-4-4.
319-17	24022	N.E. $\frac{1}{4}$ Sec. 2, Tp. 30-6-4.
387-17	24068	Bet. Secs. 16 & 17, 20 & 21, Tp. 29-4-5.
516-17	22215-B	W. $\frac{1}{2}$ Sec. 7, Tp. 29-4-4.
565-17	14023-1689	N.E. $\frac{1}{4}$ Sec. 7, Tp. 28-5-4.

CEMETERY.

263-17	23508	S.E. $\frac{1}{4}$ Sec. 35, Tp. 26-5-4.
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SCHOOL SITE.

413-17	24100	N.E. $\frac{1}{4}$ Sec. 24, Tp. 27-2-4.
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Edmonton, December 27th, 1917.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alberta.

Sir:—I have the honour to submit herewith a detailed report of the survey work in my district during the year 1917.

I organized my party the end of April, commencing work in the neighborhood of Cooking Lake. From there I worked east and south through Tofield, Camrose, Duhamel and Donalda. A considerable part of the season was spent in making surveys of New Roads and Road Diversions in the Meeting Creek, Battle River and Buffalo Lake regions. From Buffalo Lake we proceeded to Ponoka where we commenced the survey of a change in the Calgary & Edmonton Trail from the southwest corner of the Bobtail Indian Reserve to Wetaskiwin. Having completed all surveys in this neighborhood we moved towards Red Deer Lake, making several surveys on route. From here we worked north through Camrose and the Hay

Lakes country towards Edmonton, finishing the season's work south of Stony Plain about November 25th.

From the standpoint of weather the season was favourable for the accomplishment of a large amount of work, but this advantage was slightly offset by the difficulty experienced in obtaining men.

I attach herewith a classified list of the season's work.

Your obedient servant,

MILTON BROWN,

District Surveyor and Engineer.

ROAD DIVERSIONS.

Survey No.	File No.	Description.
545-17	24248	Secs. 19, 30 & 29, Tp. 51-1-5.
341-17	24042	Secs. 3 & 4, Tp. 50-20-4.
438-17	24122	Sec. 35, Tp. 50-20-4.
442-17	22107	Sec. 2, Tp. 41-16-4.
156-17	20000-B	Sec. 3, Tp. 45-22-4.
264-17	23973	Sec. 1, Tp. 44-20-4.
245-17	15702	Secs. 3, 4, 9 & 10, Tp. 42-17-4.
388-17	24081	Sec. 34, Tp. 41-16-4.
389-17	24082	Secs. 9 & 16, Tp. 41-16-4.
481-17	22041	Sec. 19, Tp. 46-22-4 & Sec. 24, Tp. 46-23-4. Railway Crossing.
722-17	24369	Secs. 8, 9, 16 & 17, Tp. 40-20-4.
233-17	23945	Secs. 19 & 20, Tp. 45-22-4.
155-17	23863	Sec. 1, Tp. 46-24-4.
720-17	24367	Sec. 11, Tp. 46-24-4.
94-17	24376	Sec. 3, Tp. 46-24-4.
721-17	24368	Sec. 11, Tp. 40-21-4.
603-17	24338	Sec. 34, Tp. 39-19-4.
602-17	24337	Secs. 3, 4, 9 & 10, Tp. 40-20-4.
604-17	24339	Sec. 34, Tp. 39-20-4 & Sec. 3, Tp. 40-20-4.
600-17	16172-B	Sec. 7, Tp. 40-20-4.
417-17	24113	Sec. 1, Tp. 39-16-4.
122-17	23847	Sec. 25, Tp. 41-20-4 & Sec. 31, Tp. 41-19-4.
375-17	24071	Secs. 8 & 9, Tp. 42-17-4.
373-17	17732	Secs. 27, 28, 33 & 34, Tp. 41-17-4.
726-17	24370	Secs. 3 & 4, Tp. 40-21-4.
668-17	24270	Secs. 26, 27 & 35, Tp. 39-21-4.
459-17	23720	Sec. 1, Tp. 35-22-4.
708-17	24353	Secs. 1, 6 & 7, Tp. 49-22/23-4.
709-17	24354	Section 29, Tp. 48-23-4.
707-17	24350	Sec. 13, Tp. 44-22-4.
176-17	20808	Sec. 23, Tp. 39-22-4.
104-17	23764	Sec. 33, Tp. 48-21-4.
247-17	22483	Sec. 4, Tp. 47-20-4.
811-17	24432	Sec. 29, Tp. 43-22-4.
103-17	22428	Secs. 25 & 30, Tp. 48-20/21-4.
685-16	23659	Sec. 12, Tp. 51-23-4.
334-16	23416	Secs. 33 & 34, Tp. 45-21-4.
404-16	23464	Secs. 19 & 30, Tp. 39-18-4.
431-16	23445	Sec. 11, Tp. 39-22-4.
572-15	19349	Secs. 7 & 12, Tp. 51-21/20-4.
137-16	23243	Sec. 8, Tp. 50-23-4.
69-15	22335	Sec. 28, Tp. 43-21-4.
68-15	22336	Sec. 17, Tp. 43-20-4.
133-15	22387	Secs. 23 and 26, Tp. 39-16-4.
156-15	20183	Secs. 30, 31, 35 & 36, Tp. 39-20/21-4.
162-15	22369	Secs. 8 & 9, Tp. 40-19-4.
362-15	22595	Secs. 15 & 22, Tp. 43-22-4.
71-15	22351	Sec. 12, Tp. 50-23-4.
605-17	24340	Sec. -14, Tp. 40-21-4.

NEW ROADS.

Survey No.	File No.	Description.
812-17	24433	Secs. 14 & 23, Tp. 40-20-4.
852-17	14339-C	Section 10, Tp. 44-22-4.
100-17	23750	Sec. 22, Tp. 44-20-4.
125-17	23794	Blind line north of Sec. 30, Tp. 42-17-4.
412-17	24107	Blind line north of Sec. 15, Tp. 42-17-4.
185-17	23822	Blind line north of Sec. 26, Tp. 39-19-4.
408-17	24096	Blind line north of Sec. 17, Tp. 40-18-4.
374-17	24072	Secs. 8 & 9, Tp. 42-17-4.
723-17	17947	Secs. 9 & 10, Tp. 40-21-4.
21-16	17789	Sec. 24, Tp. 51-21-4.
101-16	18617	Secs. 26 & 35, Tp. 41-17-4.
490-16	20751	Blind line north of Secs. 26 & 27, Tp. 39-20-4.
523-16	23517	Secs. 3 & 10, Tp. 51-27-4.
684-15	22997	Sec. 34, Tp. 49-22-4.

CHANGES IN SURVEYS.

238-17	14110-B	Change in Calgary & Edmonton Trail, Secs. 29 & 32, Tp. 51-24-4.
570-17	14110-B3	Change in Calgary & Edmonton Trail from the S.W. cor. of Bobtail Indian Reserve to Wetaskiwin.
99-17	15228	Secs. 21 & 16, Tp. 41-16-4.
601-17	16040-B	Sec. 4, Tp. 40-19-4.
416-17	15886-B	Sec. 22, Tp. 39-16-4.
98-17	14317	Secs. 1 & 11, Tp. 47-21-4.
710-17	14339-B	Secs. 2, 3 & 10, Tp. 44-22-4.
230-16	14154	Secs. 6 & 7, Tp. 52-18-4.
829-15	15166-B	Section 7, Tp. 48-23-4.
416-13	19440-B	Secs. 32 & 33, Tp. 51-26-4.
599-17	23462	Sec. 13, Tp. 46-22-4.

MISCELLANEOUS.

724-17	24371	Survey of gravel pit in Sec. 35, Tp. 43-25-4.
148-17	19532	Survey of right of way of a ditch in Sec. 1, Tp. 46-24-4.
7-16	14125	Resurvey of road in Secs. 2 & 11, Tp. 51-23-4.

EXAMINATIONS.

840-17	21992	Blind line north of Secs. 1 to 6, Tp. 52-2-5.
407-17	24086	Sec. 18, Tp. 51-22-4.
661-17	24278	Sec. 25, Tp. 44-22-4.
123-17	23846	Secs. 13 & 14, Tp. 40-21-4.
338-17	14125	Sec. 34, Tp. 49-22-4 & Sec. 4, Tp. 50-22-4.
589-16	23599	Sec. 32, Tp. 52-21-4.
57-16	23112	Sec. 5, Tp. 44-16-4.
250-16	23321	Secs. 21 & 22, Tp. 44-16-4.
310-16	18952	Sec. 11, Tp. 39-16-4.
157-15	22384	Examination of proposed road around the north side of Hastings Lake—Tp. 51-20-4.
534-15	22728	Sec. 14, Tp. 39-22-4.
521-15	22679	Sec. 20, Tp. 44-16-4.
352-13	21056	Sec. 30, Tp. 50-19-4.
391-17	24084	Secs. 8 & 9, Tp. 43-16-4.

Edmonton, December 27th, 1917.

A. P. C. BELYEA, Esq.,
Ass't Director of Surveys,
 Department of Public Works,
 Edmonton, Alberta.

Sir:—I have the honour to submit the following report in connection with survey work in the district north and east of Edmonton during the season of 1917.

I organized my party the last week of April and moved easterly along the Canadian Northern Railway, making surveys as far as Mundare. From here I moved northeasterly through St. Paul des Metis and attended to the outstanding work in the districts surrounding Flat Lake, Bonnyville, Elk Point and Frog Lake. I crossed the Saskatchewan River at Lea Park and completed all work south of the Saskatchewan River and north of Tp. 52 as far west as Range XI. From Musidora I moved to Edmonton doing some work on the way that was urgent. I disbanded my party about November 19th.

Conditions in general were excellent for survey work.

Attached hereto is a list of work done, classified as Diversions, New Roads, Changes in Existing Roads, Miscellaneous and Examinations.

Your obedient servant,

HARRY S. DAY,

District Surveyor and Engineer.

ROAD DIVERSIONS

Survey No.	File No.	Description
68-17	23069-B	In Sections 21 and 22, Tp. 54-6-4.
75-17	23783	In S.W. $\frac{1}{4}$ Section 30, Tp. 53-7-4.
76-17	23784	In S.W. $\frac{1}{4}$ Section 24, Tp. 54-9-4.
78-17	23798	In South half Section 18, Tp. 53-17-4.
79-17	23809	In N.W. $\frac{1}{4}$ Sec. 35, Tp. 52, and S.E. $\frac{1}{4}$ Sec. 3, Tp. 53-6-4.
80-17	23810	In Sections 13 and 14, Tp. 53-6-4.
81-17	23812	In N.W. $\frac{1}{4}$ Sec. 11, Tp. 53-6-4.
82-17	23813	In East half Section 17, Tp. 53-6-4.
84-17	23815	In S.W. $\frac{1}{4}$ Sec. 1 and S.E. $\frac{1}{4}$ Sec. 2, Tp. 54-6-4.
85-17	23816	In S.E. $\frac{1}{4}$ Sec. 27, Tp. 53-6-4.
86-17	23817	In N.E. $\frac{1}{4}$ Sec. 28, and S.E. $\frac{1}{4}$ Sec. 33, Tp. 53-6-4.
87-17	23818	In S.E. $\frac{1}{4}$ Sec. 21, Tp. 53-6-4.
88-17	23819	In South half Section 28, Tp. 54-6-4.
91-17	23836	In S.E. $\frac{1}{4}$ Sec. 27 and N.E. $\frac{1}{4}$ Sec. 22, Tp. 55-19-4.
92-17	23837	In N.W. $\frac{1}{4}$ Section 29, Tp. 55-18-4.
93-17	23811	In Secs. 14, 15, 23 and 26, Tp. 53-6-4.
168-17	23894	In S.E. $\frac{1}{4}$ Section 3, Tp. 54-10-4.
169-17	23896	In S.W. $\frac{1}{4}$ Sec. 4, Tp. 54-10-4, and N.W. $\frac{1}{4}$ Sec. 33, Tp. 53-10-4.
170-17	23897	North half Section 35, Tp. 53-10-4.
172-17	23899	In S. $\frac{1}{2}$ Sec. 1 and S.E. $\frac{1}{4}$ Sec. 2, Tp. 55-11-4.
173-17	23900	In S.W. $\frac{1}{4}$ Sec. 35, Tp. 54-11-4.
186-17	23911	In W $\frac{1}{2}$ Sec. 29, and N.E. $\frac{1}{4}$ Sec. 30, Tp. 55-7-4.
190-17	21017	In East half Section 34, Tp. 54-10-4.
217-17	23935	In North half Section 33, Tp. 56-7-4.
218-17	23936	In Secs. 16, 17, 20 and 21, Tp. 56-7-4.
219-17	23937	In Sec. 34, Tp. 55-8-4, and Sec. 2, Tp. 56-8-4.
220-17	23938	In N.E. $\frac{1}{4}$ Sec. 24, Tp. 56-8-4, and Secs. 19 and 30, Tp. 56-7-4.
222-17	23940	In N.E. $\frac{1}{4}$ Sec. 20 and N.E. $\frac{1}{4}$ Sec. 29, Tp. 55-8-4.
280-17	23986	In S.E. $\frac{1}{4}$ Section 34, Tp. 54-13-4.
303-17	24002	In S.E. $\frac{1}{4}$ Section 16, Tp. 57-14-4.
349-17	24047	In N.W. $\frac{1}{4}$ Section 27, Tp. 53-7-4.
350-17	24048	In N.E. $\frac{1}{4}$ Sec. 20, and S.E. $\frac{1}{4}$ Sec. 29, Tp. 53-7-4.
351-17	24049	In Sections 17 and 18, Tp. 53-7-4.
353-17	24051	In East half Section 25, Tp. 55-8-4.
355-17	24053	In North half Sec. 33, Tp. 55-7-4.
501-17	24182	In Secs. 7 and 17, Tp. 55-6-4.
502-17	24183	In N.W. $\frac{1}{4}$ Section 20, Tp. 55-4-4.
503-17	24184	In S.W. $\frac{1}{4}$ Section 15, Tp. 55-4-4.
535-17	24209	In S.W. $\frac{1}{4}$ Section 6, Tp. 54-2-4.

Survey No.	File No.	Description.
591-17	24331	In S.W. $\frac{1}{4}$ Section 35, Tp. 53-6-4.
728-17	24377	In East half Secs. 27 and 34, Tp. 55-18-4.
787-17	22598	In W. $\frac{1}{2}$ Sec. 19, Tp. 54-8-4, and S.E. $\frac{1}{4}$ Sec. 24, Tp. 54-9-4
187-16	23283	In S.E. $\frac{1}{4}$ Section 6, Tp. 55-11-4.
188-16	23284	In East half Section 8, Tp. 55-11-4.
189-16	23285	In South half Section 15, Tp. 55-11-4.
190-16	23286	In Secs. 3, 10 and 15, Tp. 55-11-4.
375-16	23431	In N.E. $\frac{1}{4}$ Sec. 19, Tp. 54-8-4.
425-16	23434	In S. $\frac{1}{2}$ Sec. 15, and S.E. $\frac{1}{4}$ Sec. 16, Tp. 54-18-4.
433-16	23435	In N.E. $\frac{1}{4}$ Section 35, Tp. 53-19-4.
460-16	23137	In S.W. $\frac{1}{4}$ Sec. 23, and W. $\frac{1}{2}$ Sec. 14, Tp. 61-6-4.
463-16	23488	In East half Section 27, Tp. 60-6-4.
516-16	21620	In East half Section 16, Tp. 59-8-4.
517-16	23310	In West half Section 9, Tp. 60-8-4.
518-16	23516	In S.E. $\frac{1}{4}$ Sec. 4, and S.W. $\frac{1}{4}$ Sec. 3, Tp. 60-8-4.
641-16	23632	In North half Sec. 33, Tp. 60-6-4.
13-15	20939	In N.W. $\frac{1}{4}$ Section 4, Tp. 57-7-4.
203-15	22448	In N.W. $\frac{1}{4}$ Section 21, Tp. 54-9-4.
205-15	22424	In North half Section 19, Tp. 55-17-4.
211-15	22444	In S.W. $\frac{1}{4}$ Section 1, Tp. 53-9-4.
214-15	22475	In Section 11, Tp. 54-10-4.
218-15	22471	In Secs. 23, 26 and 35, Tp. 54-11-4.
219-15	22470	In N.E. $\frac{1}{4}$ Section 23, Tp. 54-10-4.
220-15	22469	In N.E. $\frac{1}{4}$ Section 9, Tp. 55-10-4.
301-15	22538	In S.E. $\frac{1}{4}$ Section 26, Tp. 54-9-4.
320-15	22581	In West half Section 3, Tp. 55-9-4.
304-15	22582	In S.E. $\frac{1}{4}$ Section 29, Tp. 54-9-4.
445-15	22558	In N.W. $\frac{1}{4}$ Sec. 13, and S.W. $\frac{1}{4}$ Sec. 25, Tp. 53-8-4.
450-15	22564	In S.W. $\frac{1}{4}$ Section 5, Tp. 54-9-4.
451-15	22563	In N.E. $\frac{1}{4}$ Section 3, Tp. 54-9-4.
452-15	22566	In Secs. 11 and 13, Tp. 54-9-4.
453-15	22565	In S.E. $\frac{1}{4}$ Section 8, Tp. 54-9-4.
454-15	22597	In N.E. $\frac{1}{4}$ Sec. 19 and N.W. $\frac{1}{4}$ Sec. 29, Tp. 54-9-4.
455-15	22596	In S.E. $\frac{1}{4}$ Sec. 28, and E. $\frac{1}{2}$ Sec 33, Tp. 54-9-4.
485-15	22561	In S.E. $\frac{1}{4}$ Section 29, Tp. 53-9-4.
460-15	22593	In Secs. 15 and 22, Tp. 53-9-4.
461-15	22557	In S.W. $\frac{1}{4}$ Sec. 10, Tp. 53-8-4.
470-15	22705	In Secs. 3 and 10, Tp. 54-17-4.
542-15	22730	In East half Section 25, Tp. 53-18-4.
570-15	22755	In East half Section 36, Tp. 59-7-4.
799-14	22113	In North half Section 33, Tp. 60-6-4.
213-15	22476	In S.W. Section 28, Tp. 53-10-4.

EXAMINATIONS

66-17	15454-B	In S.W. $\frac{1}{4}$ Sec. 4, Tp. 53-4-4.
83-17	23814	Between Sections 35 and 36, Tp. 53-6-4.
89-17	23820	Between Secs. 27 and 28, Tp. 54-6-4.
90-17	23821	Between Secs. 3 and 4, Tp. 54-6-4.
115-17	24225-B	In East half Sec. 29, Tp. 54-22-4.
221-17	23939	Between Secs. 1 and 2, Tp. 56-8-4, and Secs. 35 and 36, Tp. 55-8-4.
228-17	23433	In S.W. $\frac{1}{4}$ Section 4, Tp. 54-7-4.
352-17	24050	Between Sections 14 and 15, Tp. 55-9-4.
354-17	24052	West Secs. 13, 24 and 25, Tp. 54-7-4.
377-17	24070	In N.W. $\frac{1}{4}$ Sec. 34, Tp. 54-13-4.
525-17	24205	West Secs. 7, 18 and 19, Tp. 55-2-4, and South Secs. 1, 2 and 3, Tp. 53-3-4.
859-17	24066	In Secs. 1 and 2, Tp. 61-18-4.
217-16	23297	In Section 24, Tp. 50-27-4.
244-16	23185	In N.W. $\frac{1}{4}$ Section 19, Tp. 61-23-4.
462-16	23487	Between Secs. 2 and 3, Tp. 60-6-4.
464-16	23489	Between Secs. 23 and 26, Tp. 60-5-4.
128-15	22402	West and North of Sec. 34, Tp. 55-14-4, West Sec. 3, Tp. 56-14-4.
202-15	22449	West Section 14, Tp. 54-9-4.

Survey No.	File No.	Description
226-15	18942	N. W. Section 21, Tp. 53-9-4.
303-15	22580	Between Secs. 10 and 15, Tp. 55-9-4.
305-15	22584	Between Secs. 19 and 24, Tp. 54-9/10-4.
459-15	22562	West Section 33, Tp. 53-9-4.
569-15	22813	In Secs. 23 and 26, Tp. 61-8-4.
843-15	23016	Between Secs. 11 and 14, Tp. 54-17-4.
844-15	23018	North Section 35, Tp. 53-16-4.

NEW ROADS

101-17	23077	Blind line and diversions between Secs. 26 and 35-54-6-4.
102-17	23799	Survey in Secs. 26 and 35, Tp. 62-6-4.
157-17	23860	Blind line North Secs. 15 and 16, Tp. 53-3-4.
382-17	24063	In River Lots 36 and 37, St. Albert Settlement.
526-17	17504	In Tp. 55-1/2-4 from Dyke Lake to Indian Res. 120.
608-17	22635	Thro. Secs. 6, Tp. 57-7-4. and Sec. 12, Tp. 57-8-4.
432-16	23436	Blind line between Secs. 3 and 10, Tp. 54-19-4.
675-16	21621-B	Blind line and diversion between Secs. 4/9, Tp. 59-8-4
680-15	22814	Blind line and diversion between Secs. 25 and 36, Tp. 60-7-4.

CHANGES IN EXISTING SURVEYS

67-17	21216-B	In Secs. 19, 20 and 30, Tp. 55-3-4.
241-17	15286-B	In Secs. 22 and 23, Tp. 55-19-4.
362-17	22166	In Section 33, Tp. 56-5-4.
150-16	23015	In Section 25, Tp. 59-6-4.
465-16	23490	In Section 4, Tp. 61-5-4.

MISCELLANEOUS

182-17	14392-B	Private road in Sec. 8, Tp. 50-24-4.
317-17	22556	Check on existing survey in Sec. 16, Tp. 54-7-4.
586-17	19740	Levels N. and E. of Sec. 24, Tp. 52-15-4 to drain slough on road allowance N. Sec. 24-52-15-4.
740-17	24388	Cemetery in N. W. $\frac{1}{4}$ Sec. 36, Tp. 56-7-4.
870-17	24137	School site in N. E. $\frac{1}{4}$ Sec. 29, Tp. 56-7-4.
114-16	17615	Check on existing survey east of St. Paul des Metis, North of Sec. 4, Tp. 58-9-4.
772-16	14189	Check on existing survey in W. $\frac{1}{2}$ Sec. 15, Tp. 51-25-4.
235-16	20541	In N. $\frac{1}{2}$ Sec. 26, and S. $\frac{1}{2}$ Sec. 35, Tp. 54-23-4, mounding same.
522-17	14023-1686	In S.W. $\frac{1}{4}$ Sec. 35, Tp. 55-12-4.

Edmonton, December 29th, 1917.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alberta.

Sir:—I have the honour to submit herewith the following report in connection with surveys performed during the season of 1917 in the District of North Alberta. The work is classified under New Roads, Road Diversions, Examinations, Miscellaneous Surveys and Changes in Surveys.

I organized my party in Edmonton during the last week in April and commenced field work at Peace River on April 30th. As the season advanced I worked in a southwesterly direction, covering the districts of Dunvegan, Spirit River, Grande Prairie and Saskatoon Lake, and thence westerly to Beaverlodge and Red Willow as far as the westerly boundary of the Province. I then returned to

Spirit River, and, after completing the work in this district, shipped my outfit by train to Swan River, where some miscellaneous surveys were completed, and a new road was surveyed along the easterly side of the Swan River. I then travelled by wagon to Mirror Landing and completed the survey of 40 miles of the Athabaska-Grouard Trail.

I arrived at Athabaska on October 31st, but was unable to cross the river with my outfit as the ferry had ceased running on account of the drifting ice. I therefore disbanded my party and arrived in Edmonton on November 1st.

The season was exceptionally favourable to survey work, although much time was spent in moving by wagon trail in order to cover the large district over which the work extended.

Sketch plans were submitted as the work progressed during the season, and the final plans and returns are now being prepared.

Your obedient servant,

HOMER P. KEITH,

District Surveyor and Engineer.

NEW ROADS

Survey No.	File No.	Description
831-14	22229	Sec. 32, Tp. 83-21-5, and Secs. 4 and 5, Tp. 84-21-5.
707-15	22927	Section 16, Tp. 83-24-5.
922-15	23135	Sec. 30, Tp. 83-21-5, and Secs. 25 to 29, Tp. 83-22-5.
923-15	23136	Sections 10 and 11, Tp. 83-23-5.
1-16	23144	River Lots 49, 55 and 56, and Secs. 16 and 21, Tp. 77-5-6.
65-17	23804	Section 13, Tp. 81-26-5.
97-17	23824	Sections 2 and 11, Tp. 81-2-6.
106-17	23460	Across Ranges 10, 11 and 12, W. 6th Mer., Tp. 70.
109-17	23792	Section 29, Tp. 80-3-6.
116-17	22162	Sections 20 and 29, Tp. 83-21-5.
128-17	23541	Along blind line Secs. 1 and 2, Tp. 78-5-6, and through Sec. 7, Tp. 78-4-6.
129-17	23849	Between River Lots 33 and 34 and 49 and 50, Spirit River Settlement.
145-17	23888	Between Secs. 17 and 20, and thro. Secs. 20 and 29, Tp. 80-2-6.
181-17	23905	Sections 2 and 3, Tp. 74-8-6.
191-17	23903	River Lot 41, Shaftesbury Settlement, Tp. 83-21-5.
235-17	23950	Sections 24 and 25, Tp. 83-22-5.
307-17	24007	River Lots 38 and 39, Shaftesbury Settlement, and Sections 13 and 24, Tp. 83-22-5.
315-17	24015	Along blind line Section 15, Tp. 83-24-5.
420-17	24037	Along blind line Section 13, Tp. 72-6-6.
448-17	24036	Sections 25 and 36, Tp. 72-6-6.
464-17	24144	From Sec. 34 to Sec. 16, Tp. 78-5-6.
472-17	24152	Section 35, Tp. 73-8-6.
482-17	17505-B	Section 2, Tp. 81-4-6.
756-17	23541-B	Through Sections 10, 11 and 2, Tp. 78-4-6.
757-17	24391	Along blind line Secs. 35 and 36, Tp. 78-5-6, and blind line Sec. 31, Tp. 78-4-6.
755-17	19446-B	Through River Lots 1 to 8, Tp. 79-5-6, and through Secs. 34 and 36, Tp. 78-5-6.
865-17	19499-C	Through Sections 7 and 18, Tp. 80-4-6.
867-17	22717	Through Tps. 72 and 73, Ranges 9 and 10, W. 5th Mer.
868-17	17502-B	From Sec. 25, Tp. 72-26-5 to north boundary Sec. 33, Tp. 69-23-5.

DIVERSIONS

Survey No.	File No.	Description
575-15	22782	Sections 26 and 27, Tp. 80-3-6.
576-15	22781	Sections 11 and 14, Tp. 81-2-6.
579-15	22785	Sections 26 and 27, Tp. 81-4-6.
388-16	23245	Section 24, Tp. 73-6-6.
105-17	23848	Section 20, Tp. 83-21-5.
108-17	23701	Section 13, Tp. 73-11-6.
143-17	23828	Section 31, Tp. 80-3-6.
144-17	23887	Sections 33 and 34, Tp. 81-4-6.
230-17	23942	Sections 27 and 28, Tp. 83-22-5.
281-17	23988	Section 15, Tp. 83-24-5.
282-17	23989	Sections 13 and 24, Tp. 82-24-5.
283-17	23990	Section 23, Tp. 82-26-5.
457-17	24162	Sections 8 and 9, Tp. 74-6-6.
465-17	24145	Lot 53 and S.E. Sec. 30, T. 77-5-6.
466-17	24146	River Lots 21 and 34, Tp. 78-5-6.
467-17	24147	Sections 5 and 8, Tp. 79-5-6.
468-17	24148	Correction line North of Tp. 78-5-6, and East boundary Secs. 26 and 35, Tp. 78-5-6.
470-17	24150	Section 6, Tp. 71-7-6.
471-17	24151	Sections 15 and 22, Tp. 71-7-6.
473-17	24166	Section 6, Tp. 74-6-6.
540-17	24219	Secs. 19 and 30, Tp. 71-7-6, and Sec. 28, Tp. 71-8-6.
758-17	24392	Section 19, Tp. 73-7-6.
820-17	24443	Section 35, Tp. 77-6-6.

EXAMINATIONS

577-15	22780	Section 1, Tp. 82-2-6.
578-15	22786	Section 10, Tp. 82-4-6.
2-16	20052-B	Section 9, Tp. 76-5-6.
236-17	23951	Section 28, Tp. 71-4-6.

MISCELLANEOUS

749-17	23108	Levels on E. D. & B. C. Railway crossing in Kinoosays Indian Reserve, Swan River.
68-16	23173	Cemetery—S.E. Sec. 16, Tp. 81-3-6.
161-17	23866	Cemetery—River Lot 41, Spirit River Settlement.
580-17	24311	School Site—Spirit River Townsite.
759-17	14096	Levels on proposed crossing of E. D. & B. C. Railway on East boundary Sec. 23, Tp. 73-10-5.

CHANGES IN SURVEYS

246-15	21161	Section 5, Tp. 72-8-6.
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Lacombe, Alta., Dec. 31st, 1917.

A. P. C. BELYEA, Esq.,

Ass't Director of Surveys,

Edmonton, Alberta.

Sir:—I beg to submit the following report in connection with the work done in the Lacombe Public Works District during the year 1917, and attached hereto is a schedule showing the amount of work done, and classified as New Roads, Road Diversions and Examinations.

The beginning of the year my time was spent in preparing the returns of the previous season's surveys and making a few examinations.

I organized my party and took the field on April 24th, and moved toward the west, making surveys on the way until we reached Rocky Mountain House. Here we made survey of road running northward along the west side of the Saskatchewan River, and also survey of road running westward to Horburg along the north side of the Saskatchewan River, and several smaller surveys on the east side of the river which had been outstanding for a number of years. We completed this work about the 1st of August, and then moved into the east country where we spent the balance of the season in making a number of small surveys along the Grand Trunk Pacific Railway between Trochu and Alix. It was now getting late in the season and we pulled to headquarters about the 1st of December and disbanded.

This has been an exceptionally good season for field work, scarcely any rain to delay the work, and I was able to hold the party together for the whole season.

- The remainder of the year was spent as usual in the office, preparing plans and field notes.

Your obedient servant,

A. S. STEWART,

District Surveyor and Engineer.

EXAMINATIONS

Survey No.	File No.	Location
309-08	15892	Examination in Sec. 12-36-24-4.
45-12	19378	Examination between Secs. 3/4-40-5-5.
278-12	20160	Examination West of Rocky Mountain House along the South side of the Saskatchewan River in Tp. 39-7-5.
720-14	22102	Examination between Secs. 19/30-34-25-4.
30-15	22345	Examination in Sec. 36-40-6-5 and S.E. 2-41-6-5.
309-15	22519	Examination in Secs. 28/33-40-7-5.
386-15	22678	Examination in W. ½ Sec. 4-35-23-4.
528-15	22607	Examination in S.E. 3-41-23-4.
5-15	22764	Examination in S.E. 13-35-22-4.
739-15	22878	Examination in N.W. 28 and S.W. 33-40-24-4.
743-15	15970-C	Examination in Secs. 17/20-35-3-5.
862-15	23031	Examination in N.E. 31-34-25-4.
52-16	23113	Examination north of Sec. 17-36-28-4.
158-16	15431	Examination South of Sec. 1-34-3-5.
183-16	22738	Examination in Secs. 14/23-41-23-4.
194-16	23288	Examination in Secs. 13/14-24-36-7-5.
297-16	23549	Examination north of Sec. 31-34-22-4.
477-16	23503	Examination between Secs. 10/11-33-23-4.
480-16	23506	Examination across Sec. 17-34-23-4.
492-16	23512	Examination in E. ½ Sec. 17-33-27-4.
548-16	23558	Examination across Secs. 7/8-36-25-4.
594-16	23601	Examination in Sec. 21-35-3-5.
612-16	23590	Examination through Secs. 5/8/17-34-23-4.
660-16	23640	Examination in N.E. 25-35-1-5 and W. ½ Sec. 30-35-28-4.
662-16	19648	Examination east of N.E. 25-36-28-4.
695-16	23665	Examination east of Sec. 31-40-27-4.
736-16	23709	Examination in N.W. 14-39-8-5.
3-17	23770	Examination east of Secs. 28/33-34-1-5.
12-17	16173	Examination east and west of Sec. 14-39-7-5.
21-17	23712	Examination between Secs. 28/29-36-6-5.
159-17	23857	Examination at the N.W. corner Sec. 27-34-24-4.
165-17	19684	Examination and survey of ditch in S.W. 2-39-2-5.
234-17	22845	Examination north of Secs. 31/32-40-3-5.
237-17	23952	Examination in S.E. 31-35-28-4.
275-17	23972	Examination in S.E. 33-40-24-4.

Survey No.	File No.	Location
293-17	21186	Examination in S.W. 2-37-16-4.
363-17	17975	Examination between Secs. 33/34-36-22-4.
364-17	18804	Examination between Secs. 3/4-37-22-4.
376-17	24079	Examination between Secs. 11/12-37-22-4.
571-17	22885	Examination in Secs. 23/26-39-23-4.
610-17	23097	Examination between Secs. 7/8-37-22-4.
615-17	24225	Examination east of Sec. 1-35-23-4.
687-17	24286	Examination between Secs. 33/34-41-23-4.
741-17	20965	Examination in Secs. 21/28-38-27-4.
760-17	14000	Examination and survey of the S. ½ Lot 13, Block 2, Plan 1, Lacombe.
815-17	14110-B-3	Examination in S.E. 17-38-27-4. and dug pits on the old C. & E. Trail between Red Deer and Innisfail.
895-17	17598	Examination north of Sec. 20-37-20-4.

NEW ROADS

434-13	21041	New road across Sec. 11 and S.E. 14-37-6-5.
535-14	21803	New road across Secs. 15/16/21/22-40-2-5.
733-15	18261	New road along blind line between Secs. 13/24-37-23-4.
426-16	23468	New road through Tps. 39/40, Rgs. 8/9, W. 5.
476-16	22204	New road through centre of Secs. 14/15-37-4-5.
593-16	23556	New road across Secs. 1/11/12-36-25-4 and Sec. 6-36-24-4.
610-16	19176-B	New road in Secs. 4/5/8/9-34-22-4.
697-16	23666	New road along blind line north of Sec. 2-34-1-5.
22-17	23739	New road through Secs. 15/22/27/34-41-5-5.
110-17	23833	New road along ¼ line in Secs. 34/35-40-7-5.
117-17	23832	New road across Secs. 8/9-40-6-5.
124-17	23834	New road through Sec. 8-39-5-5.
127-17	23845	New road across N. ½ Sec. 25, N.E. 26 and S.E. 35-40-24-4.
339-17	24035	New road along ¼ line of Sec. 28-33-23-4.
380-17	22273	New road across Secs. 2/11-35-3-5.
520-17	15257	New road in W. ½ Sec. 26-39-27-4.
548-17	21877	New road across Secs. 18/30/31/32-40-7-5 and Secs. 13/24/-25-40-8-5 and Secs. 5/6/7-41-7-5.
569-17	22697	New road in Secs. 13/14-40-8-5.
612-17	24222	New road in N. ½ Sec. 21-37-22-4.
753-17	24217	New road south of the N.E. 30-35-28-4.
845-17	24213	New road in N.W. 32-40-26-4.
860-17	22527	New road crossing G.T.P. in N.W. 21-37-23-4.

DIVERSIONS

552-12	20519	Diversion in W. ½ Sec. 21-38-23-4.
398-14	21740	Diversion in N.E. 20 and W. ½ Sec. 21-36-22-4.
254-15	22493	Diversion in N.E. 9-39-7-5.
310-15	22518	Diversion in E. ½ Sec. 28 and S. E. 33-40-7-5.
311-15	22517	Diversion in N.E. 9, E. ½ Sec. 16 and S.E. 21-40-7-5.
731-15	22950	Diversion in S.W. 16-37-22-4.
736-15	22948	Diversion in N.E. 35-36-24-4 and S. ½ Sec. 2-37-24-4.
737-15	22949	Diversion in N.E. 13-37-24-4.
29-16	22775	Diversion in S.E. 25-39-7-5 and S.W. 30-39-6-5.
237-16	23316	Diversion in E. ½ Sec. 34 and N.W. 35-34-5-5.
461-16	23449	Diversion in N.E. 8 and S. ½ Sec. 17-39-22-4.
478-16	23504	Diversion in N.E. 29 and E. ½ Sec. 32-33-23-4.
479-16	23505	Diversion in N.W. 21-34-24-4.
532-16	23465	Diversion in N.W. 19-36-23-4.
534-16	23552	Diversion in N.E. 9-35-23-4.
549-16	23559	Diversion in S.W. 15-36-26-4.
556-16	23438	Diversion in E. ½ Sec. 24-38-3-5.
560-16	23565	Diversion in N.W. 17-40-23-4.
637-16	23624	Diversion in E. ½ Sec. 24 and E.S. 25-35-22-4, and W. ½ Sec. 19-35-21-4.
658-16	15648	Diversion in S.E. 3-35-25-4.
661-16	23641	Diversion in N.W. 32-37-4-5.
6-17	20594	Diversion in S.W. 26-38-1-5.
23-17	23752	Diversion in N.E. 23-33-23-4.

Survey No.	File No.	Location
24-17	23754	Diversion in N.W. 33-33-23-4.
48-17	15970-D	Diversion in N.W. 20-35-3-5, change.
49-17	18105	Diversion in N.E. 19-34-23-4.
126-17	23844	Diversion in N.W. 36-40-24-4.
142-17	23881	Diversion in S.E. 17-40-23-4.
146-17	14250-A-2	Diversion in N.W. 17-39-26-4, change.
158-17	23858	Diversion in S.E. 24-34-22-4.
187-17	21875	Diversion west of Sec. 10 and North of Secs. 10/11/12-41-23-4.
212-17	23944	Diversion in N.W. 15 and N.E. 16-36-6-5, change.
229-17	23242	Diversion in S.E. 3-41-2-5, change.
268-17	23977	Diversion in S. ½ Sec. 1-38-22-4 and N.W. 36-37-22-4.
345-17	24043	Diversion in N.E. 8-35-2-5.
346-17	24044	Diversion in N.W. 31-34-2-5 and E. ½ Sec. 36-34-3-5.
347-17	24045	Diversion in N.W. 23-36-1-5.
365-17	23198	Diversion in N.W. 1-35-24-4.
366-17	24075	Diversion in N.E. 32 and N.W. 33-35-24-4, and S. ½ Sec. 5-36-24-4.
367-17	24076	Diversion in N.E. 26, E. ½ Sec. 35 and W. ½ Sec. 36-36-24-4.
368-17	24077	Diversion in S.E. 13-37-24-4.
461-17	24134	Diversion in S.E. 15-35-25-4.
462-17	24135	Diversion in S. ½ Sec. 3, S.E. 4, S. ½ Sec. 5 and S.W. 6-36-25-4, and N. ½ Sec. 34, N.E. 32 and N.W. 31-35-25-4.
463-17	24158	Diversion in N.E. 11-36-25-4, change.
497-17	24195	Diversion in N.E. 14 and S.E. 23-41-25-4.
549-17	22616-B	Diversion in S.E. 6-36-24-4 and N.W. 32-35-24-4.
567-17	24034	Diversion in N.W. 12-35-23-4.
579-17	24324	Diversion in S.E. 25 and S.E. 27-36-24-4.
614-17	24222	Diversion in W. ½ Sec. 18-22-4 and E. ½ Sec. 13 and S.E. 24-35-23-4.
616-17	24226	Diversion in S. ½ Sec. 1-35-23-4.
656-17	24268	Diversion in S.E. 3-37-20-4 and N.W. 34-36-20-4.
688-17	24287	Diversion in S.W. 15-41-23-4.
806-17	24437	Diversion in N.W. 29, S.E. 31 and W. ½ Sec. 32-36-23-4.
835-17	20516-B	Diversion in S.E. 12-37-24-4 and S.W. 7-37-23-4.
894-17	22408	Diversion in N.W. 31-39-8-5 and S.W. 6-40-8-5.

Edmonton, December 20th, 1917.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alberta.

Sir:—Attached you will find detailed report of the work done in my district of North Alberta during the past season.

I organized my party and shipped my outfit to Wolf Creek on May 12th, my intention being to clean up as far as possible the outstanding work in the Edson constituency.

I surveyed a number of diversions around Thornton and Rosevear, and also roads from Thornton to Rosevear both on the north and south sides of the Macleod River, also completing the road from Edson to Thornton by giving access to the station at this point.

Having moved to Rosevear, I surveyed roads leading from Rosevear station to the ferry over the Macleod River and from there northeast to what is known as Bear Lake, also a road to give access to Rosevear station from the south.

Moving to Macleod Valley, I surveyed a road leading west from the ferry along the river flat to give an outlet to settlers along this flat, also a road from the ferry southeast to Carrot Creek and portions of the road between Macleod Valley and Peers Station.

Between October 16th and 20th we had two heavy falls of snow, there being between 2 and 3 feet of snow on the level, which somewhat hindered survey operations.

Working north, I then surveyed the road from Macleod Valley to Shining Bank, also several road diversions in the neighborhood of Shining Bank.

From Shining Bank I surveyed the road to what is known as Bear Lake, passing through the MacKenzie Settlement and Mussel and connecting with the road from Rosevear.

I also surveyed diversions on road allowance connecting Mussel and Bear Lake with the Macleod Valley road.

Moving to Peers I completed the southern portion of the road from Macleod Valley to Peers station, completing same on Dec. 12th.

At this point I loaded car with my outfit and was moved into Edmonton on December 13th. I unloaded car on the 14th, distributed my outfit, and disbanded most of my party on the 15th, and sent out my horses, etc., on the 17th.

The last few weeks of the season were exceptionally cold for this time of the year, the thermometer at Macleod Valley dropping to 65 degrees below zero, and as the frost had penetrated deep into the ground, I had to make arrangements to have the last few sets of pits dug later on.

The season on the whole has been very favourable for survey operations, but the difficulty of securing good men has retarded the work to a considerable extent.

All of which is respectfully submitted.

Your obedient servant,

P. N. JOHNSON,

District Surveyor and Engineer.

NEW ROADS.

Survey No.	File No.	Description.
50-13	20564	New Road from Peers to Shining Bank, Tps. 54, 55 and 56, Rgs. 14, W. 5th Mer.
631-13	21322	New Road from Thornton to Rosevear, Tp. 54, Rges. 14 & 15, W. 5th Mer.
294-14	21623	New Road from Shining Bank to Bear Lake, Tps. 55 and 56, Rge. 15, W. 5th Mer.
544-15	22277	Secs. 15 and 16, Tp. 64-1-5.
671-15	22893	New Road across Secs. 18-24 incl., Tp. 54-15-5 and across Sec. 13, Tp. 54-16-5.
55-15	23172	New Road across Secs. 3, 4 and 8, Tp. 55-14-5.
128-16	23733-B	New Road and diversions in Secs. 2, 11, 12 & 14, Tp. 54-16-5.
130-16	23225	New Road in Sec. 2, Tp. 54-16-5 and Sec. 35, Tp. 53-16-5.
132-16	23226	New Road in Secs. 2 & 3, Tp. 54-16-5 & Sec. 34, Tp. 53-16-5.
427-17	24115	New Road across Secs. 34 & 35, Tp. 54-14-5.
590-17	21548	New Road in N.W. ¼ Sec. 2, Tp. 64-16-5.
717-17	24359	New Road across Sec. 16, Tp. 54-15-5.

Survey No.	File No.	Description
796-17	24425	New Road across Secs. 26 & 27, Tp. 54-15-5.
886-17	24483	New Road along blind line north of Sec. 3, Tp. 55-14-5.

ROAD DIVERSIONS.

612-15	22776	Diversions in Secs. 20 and 21, Tp. 54-15-5.
131-16	23227	Diversion in S.E. $\frac{1}{4}$ Sec. 25, Tp. 53-16-5.
725-17	24372	Diversion in N.E. $\frac{1}{4}$ Sec. 20 & S.W. $\frac{1}{4}$ Sec. 28, Tp. 54-15-5.
848-17	21322-B	Diversion in S.W. $\frac{1}{4}$ Sec. 33, Tp. 54-15-5.
849-17	21322-C	Diversion in N.W. $\frac{1}{4}$ Sec. 28, Tp. 54-15-5.
885-17	24482	Sec. 33, Tp. 55-15-5 & Sec. 4, Tp. 56-15-5.
887-17	24484	Diversions in N.E. $\frac{1}{4}$ Sec. 11, Tp. 55-15-5 & N.E. $\frac{1}{4}$ Sec. 7, Tp. 55-14-5.
888-17	24485	Diversion in N.E. $\frac{1}{4}$ Sec. 19, Tp. 56-13-5.
903-17	24493	Diversion in N.E. $\frac{1}{4}$ Sec. 34, Tp. 56-14-5.

EXAMINATIONS.

702-14	22117	Examination re diversion in S.W. $\frac{1}{4}$ Sec. 30, Tp. 56-14-5 (not required).
581-17	21367-B	Examination re diversion in S. $\frac{1}{2}$ Sec. 30, Tp. 53-17-5.

Edmonton, December 14th, 1917.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alberta.

Sir:—I have the honour to make the following report of my work for the season of 1917.

I was attached to the Surveys Office from August 27th and employed on such work as required immediate attention and on which it was not necessary or economical to send a full party. When possible I employed what help I required in the vicinity of the survey.

My work was of a very miscellaneous nature and consisted of survey of new roads, road diversions, topographical surveys, drainage, retracements, examinations, reports and cost estimates.

A detailed list of work done is enclosed.

I have the honour to be, Sir,

Your obedient servant,

FRED. V. SEIBERT.

● NEW ROADS.

Survey No.	File No.	Description.
889-17	21603	Across Section 7, Tp. 42-4-5.
95-17	19315	Across Section 22, Tp. 12-10-4.
576-17	15181-B	Across Sec. 18, Tp. 30-1-5, Calgary-Edmonton Auto Trail.
216-16	15054-C	Along blind line on north boundary of Secs. 27, 28 & 29, Tp. 48-27-4 with school site in Sec. 29.
227-17	23802	Across Section 29, Tp. 23-1-4.
813-17	23800	Across Secs. 21, 22 & 23, Tp. 23-1-4.
574-17	24295	Across Section 29, Tp. 52-16-4.

ROAD DIVERSIONS.

816-17	24441	Secs. 1, 2 & 12, Tp. 23-4-4.
226-17	23801	Secs. 14 & 23, Tp. 23-1-4.

Survey No.	File No.	Description.
225-17	22231	Sec. 17, Tp. 23-1-4.
833-17	24427	Sec. 13, Tp. 56-23-4.
426-17	24073	Secs. 25 & 36, Tp. 55-24-4.
666-17	24309	Sec. 36, Tp. 54-25-4.
432-17	24125	Sec. 10, Tp. 55-24-4.

TOPOGRAPHICAL SURVEYS.

	2873-C	Survey of Red Deer Ladies' College Grounds.
878-17	23801-B	Sec. 13, Tp. 23-1-4, survey of temporary road diversion from the Empress bridge through C.P.R. grounds.

DRAINAGE.

Prison farm, Fort Saskatchewan, E. $\frac{1}{2}$ Sec. 29, Tp. 54-22-4.

EXAMINATIONS.

891-17	14250 A2	Examination of road survey and wash-out, Section 17, Tp. 39-26-4.
672-17	14135	Trail across Secs. 26 & 35, Tp. 51-19-4.
890-17	14211	Sec. 6, Tp. 52-24-4 & Sec. 1, Tp. 52-25-4.
892-17	14154	In Secs. 6 & 7, Tp. 52-18-4.
896-17	23666	Sections 2 & 11, Tp. 34-1-5.

RETRACEMENT.

893-17	25009-B	East boundary Secs. 20 & 29, Tp. 53-25-4.
184-16	14537	Part of St. Albert Trail in Sec. 26, Tp. 53-25-4.

COST ESTIMATE.

816-17	24441	Sections land 2, Tp. 23-4-4.
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DRAINAGE BRANCH

December 31st, 1917.

L. C. CHARLESWORTH, ESQ.,

Deputy Minister of Public Works,

Edmonton, Alberta.

Sir:—I beg to submit the following report of the work of the Drainage Branch during the year 1917.

Since the passing of the Drainage Act in 1916, and amendments thereto in 1917, several petitions have been received for the formation of Drainage Districts. The passing of The Reclamation Act in 1917 has also simplified the prosecution of drainage works. Formerly the ownership and control of all lakes, marshes and swamps were vested in the Crown in the right of Canada, while control of the drainage of land was vested in the Crown in the right of the Province.

This divided jurisdiction interfered with the drainage of swamp lands, but under The Reclamation Act provision is made whereby vacant Dominion lands, included within a drainage district, may be purchased by the Province from the Dominion Government, and, when reclaimed, may be sold and the proceeds of the sale applied to the cost of the drainage work. There is also provision made for the drainage of Dominion lands in connection with the construction of highways; for the construction of small drainage projects to be dealt with by the Dominion Government, and for drainage projects initiated by the Dominion Government under the Provincial Drainage Act.

Ten of the petitions received for the organization of drainage districts during the year complied with the requirements of the Drainage Act. The following statement shows the location of the area covered by each petition, and the stage to which the work called for by such petition has been advanced:

- (1) Parts of tps. 47 and 48, in rg. 15; of tps. 46, 47, 48, in rg. 16; of tps. 46, 47, 48 in rg. 17; all west of 4th M. Work here has advanced to the point where assessment has been made and the time for appeals has expired.
- (2) Parts of tps. 44 and 45 in rg. 14; of tps. 44 and 45 in rg. 15; and tps. 44 and 45, rg. 16; all west of 4th M. Field work completed and office work in hand.
- (3) Parts of tp. 44, rge. 13, and tp. 44, rg. 14, west of 4th M. Field and office work completed, and scheme ready for assessment.
- (4) Parts of tps. 42, 43, 44, 45, 46, in rg. 16; of tps. 43, 44, 45, in rg. 17; and of 44 and 45 in rg. 18; all west of 4th M. Field work completed and office work in hand.
- (5) Parts of tps. 46 and 47 in rg. 17; of tps. 45, 46, 47 and 48 in rg. 18; all west of 4th M. Field work completed and office work in hand.
- (6) Parts of tps. 47 and 48 in rg. 12; and of tps. 47 and 48 in rg. 13; all west of 4th M. Field work wholly and office work nearly completed.

The foregoing areas are all situated in that stretch of flat country lying east of Camrose and between the G.T.P. and C. P. Railways, and through which runs the line of division between the water which finds its way to the Vermilion River and the water flowing to the Battle River. There are few water courses, and the slope of the land is such that natural drainage is insufficient.

- (7) Parts of tps. 35 and 36 in rg. 2; and of tps. 36 and 35 in rg. 3; all west of 5th M. Field work three-quarters completed when operations were stopped by cold weather.
- (8) Parts of tp. 42 in rg. 14; and of tps. 41 and 42 in rg. 15; west of 4th M. Preliminary examination made.
- (9) Parts of tp. 37 in rg. 20; of tps. 37 and 38 in rg. 21; all west of 4th M. Preliminary examination made.
- (10) Parts of tp. 45 in rg. 23; and of tp. 45 in rg. 24; all west of 4th M. Preliminary examination made.

Proposals to erect drainage districts in the vicinity of Smoky Lake, of Beaverhills Lake, of Cooking Lake and of Penhold have been under consideration, but the petitions so far received do not conform with the requirements of The Drainage Act.

Although there have been several enquiries and investigations as to carrying out of smaller drainage schemes under The Private Ditches Act, no such scheme has been completed.

During the year numerous requests for levels and information regarding drainage, in addition to the above, were received and dealt with. Some seventy examinations on the ground were made, and where necessary, levels were taken and ditches staked out.

Your obedient servant,

A. MACDONALD,

Drainage Engineer.

THE MINES BRANCH

Edmonton, February 20th, 1918.

L. C. CHARLESWORTH,

Deputy Minister of Public Works,

Edmonton, Alberta.

Sir,—In accordance with the provisions of The Mines Act, I herewith submit my report of the Mines Branch for the year ending December 31st, 1917.

There were 283 coal mines, one copper ore mine and two shale mines in operation during the year; of these 48 were opened, 11 reopened and 38 abandoned.

The output of coal for the year 1917 was 4,863,414 tons, exceeding that for the year 1916 by 214,810 tons, although the production was considerably interfered with owing to labor trouble and lack of railway facilities in certain districts.

The largest monthly production of coal was in November, when 607,531 tons were produced. It will, therefore, be noted that if the mines had worked steadily throughout the year with the present labor employed, and the present amount of development, that the amount of coal produced would have been over 7,250,000 tons or approximately 2,500,000 tons in excess of what was actually produced.

The importance of this will be understood when it is remembered that over 3,000,000 tons of imported coal are being consumed in the provinces of Manitoba, Saskatchewan and Alberta, a territory which should be entirely supplied by Alberta mines.

Several samples of mine air were taken by the officials of the Department and forwarded for the purpose of analysis to the laboratory conducted by the Federal Government at Ottawa. The information obtained from these analyses has been very useful and has been the means of assisting us in arriving at a more definite conclusion as to what is required to insure greater safety and efficiency in gaseous mines.

The interest shown by mine operators and other officials in co-operating with the Inspectors in this connection has been very gratifying and the result has been that the conditions of these mines so far as safety is concerned, has been much improved, and everything that can be done with this end in view is being put into effect.

Very little progress has been made respecting the analyses of the different coals in the province during the year as I was requested by the officials of the Federal Government to stop forwarding further samples. Samples are now being forwarded to the University of Alberta, where complete equipments for analyses of both coal and gas have been installed.

Considerable improvement has been noticed respecting the results of examinations held under the provisions of The Mines Act for the granting of certificates of competency owing in a great measure to the work carried on under the supervision of Mr. W. A. Davidson at the Institute of Technology and Art at Calgary.

The plans of the workings of mines in the Province continue to show a great improvement as a result of the Regulations put into effect on June 8th, 1915.

Satisfactory progress is still being made in connection with training in Mine Rescue and First Aid Work, three Mine Rescue Cars and six Stations being now in operation. Whenever possible these cars and stations are placed under the charge of returned soldiers who have previously been engaged in mining. The results obtained by these appointments have been very satisfactory.

Arrangements have been made by the Rocky Mountain Branch of the Canadian Mining Institute whereby competitions in First Aid and Mine Rescue Work will be held at Lethbridge on July 1st, 1918. These competitions will be open to all persons employed in connection with mining in British Columbia or Alberta.

The District Inspectors have visited the various mines in the districts under their charge at different intervals during the year, and have investigated all fatal and serious accidents which have occurred, and in addition have attended all inquests.

The average number of persons employed in or about coal mines during the year was 2263 above ground and 6047 below ground, the total number of persons employed above and below ground on December 31st, 1917, being 9812. This shows an increase of 1213 over the number employed in December, 1916.

A slight increase took place in the number of accidents during the year 1917 as compared with the year 1916. Four persons lost their lives in accidents above ground and 20 below ground, 10 serious accidents occurred above ground and 52 below ground, and 6 slight accidents occurred above ground and 33 below ground.

No fatal or serious accidents occurred during the year from the ignition of gas or coal dust.

Safety lamps of the Wolf type which have been in use in practically all the mines where safety lamps are required, are gradually being replaced by electric cap lamps of the Edison type. There are 5705 safety lamps in use in the Province. Of these 3625 are of the Wolf type, 207 of the Clanny type, 13 of the Marsaut type, 2 of the Kohler type and one of the Hailwood type. 1197 electric lamps of the Edison type, 600 of the Wico type and 50 of the Ceag type are also in use, the Edison and Wico types being cap lamps and the Ceag type hand lamps.

The inert dust barriers referred to by me in previous reports are being maintained where required. These barriers extend from 175 feet to 200 feet in length and consist of shelves 18 to 24 inches wide and 24 inches apart.

The triple entry and panel systems of working also referred to by me in a previous report are being considerably extended with satisfactory results.

Six persons were prosecuted for contraventions of The Mines Act throughout the year.

Increases have been made from time to time in wages paid to mine employees.

Several appointments were made during the year to the staff of Mine Rescue Superintendents and District Inspectors of Mines. Mr. William Stevenson, formerly of the Brazeau Collieries, Ltd., Nordegg, was appointed District Superintendent of Mines, succeeding Mr. Francis Aspinall, who resigned to take up a position as manager with the Midland Collieries, Ltd., at Drumheller. Mr. Thomas Longworth, a returned soldier, was appointed superintendent of the Lethbridge Mine Rescue Station, succeeding Mr. Alex. MacAskill, who was removed to Drumheller to act as Superintendent of the Car in that district. Mr. Alex. MacAskill resigned as superintendent of the Drumheller Mine Rescue Car, and was succeeded by Mr. Samuel Troman, who is also a returned soldier. A Mine Rescue Station has been installed, and is now in operation, under the direction of Mr. James Derbyshire, at Mountain Park.

On August 22nd, 1917, I was appointed by Order-in-Council to act on a Commission along with Alderman J. A. Kinney, of Edmonton, and Mr. W. F. McNeill, of Calgary, to investigate Workmen's Compensation. This occupied most of my time from the beginning of September until the end of the year but resulted in a unanimous report being made recommending that a new Workmen's Compensation Act be put into effect.

SUMMARY OF STATISTICS.

Number of tons of coal imported into Western Canada during nine months ending September 30th, 1917.....	2,213,501
Number of short tons of coal produced.....	4,863,414
Number of short tons of briquettes produced.....	93,818
Number of short tons of coke produced.....	31,630
Number of short tons of shale produced for making bricks.....	5,682
Number of short tons of bricks sold.....	7,919
Number of coal mines in operation.....	283
Number of copper ore mines in operation.....	1
Number of shale mines in operation.....	2
Number of mines opened.....	48
Number of mines re-opened.....	11
Number of mines abandoned.....	38
Average number of persons employed above ground.....	2,263
Average number of persons employed below ground.....	6,047
Number of separate accidents causing loss of life.....	24
Number of deaths caused by accidents above ground.....	4
Number of deaths caused by accidents below ground.....	20
Number of serious accidents above ground.....	10
Number of serious accidents below ground.....	52
Number of slight accidents above ground.....	6
Number of slight accidents below ground.....	33
Number of persons prosecuted under The Mines Act.....	6
Number of provisional overmen's certificates issued during 1917.....	192
Number of third class certificates issued during 1917.....	51
Number of second class certificates issued during 1917.....	14
Number of first class certificates issued during 1917.....	9
Number of mine surveyor's certificates issued during 1917.....	7
Number of mine rescue certificates issued during 1917.....	79
Total number of third class certificates issued to date.....	487
Total number of second class certificates issued to date.....	225
Total number of first class certificates issued to date.....	176
Total number of mine surveyor's certificates issued to date.....	133
Total number of mine rescue certificates issued to date.....	340

In the following tables the short ton of 2,000 lbs. is used in all cases.

Year	Output in tons for N.W.T. (Alberta and and Saskatchewan)	Output in tons Alberta
1901	346,649	
1902	510,674	
1903	622,939	
1904	782,931	
1905		811,228
1906		1,385,000
1907		1,834,745
1908		1,845,000
1909		2,174,329
1910		3,036,757
1911		1,694,564
1912		3,446,349
1913		4,306,346
1914		3,821,739
1915		3,434,891
1916		4,648,604
1917		4,863,414

CLASSIFICATION OF OUTPUTS DURING THE YEARS 1901 TO 1917
INCLUSIVE.

Year	Lignite	Lignite and Bitu- minous	Bitu- minous	Anthra- cite	Coal used in Coke Produc- tion	Briqu- ettes	Coke
*1901	-----	331,907	-----	14,742	-----	-----	-----
*1902	-----	494,087	-----	16,587	-----	-----	-----
*1903	-----	617,754	-----	5,185	-----	-----	-----
*1904	-----	759,568	-----	23,363	-----	-----	-----
1905	-----	972,686	-----	43,653	71,292	-----	46,640
1906	602,780	-----	546,623	235,597	103,936	-----	69,844
1907	639,335	-----	939,295	256,115	112,887	49,585	73,782
1908	584,334	-----	1,011,571	249,095	128,397	36,261	75,657
1909	763,673	-----	1,197,399	213,257	148,104	89,785	87,812
1910	878,011	-----	1,896,961	261,785	196,249	108,996	121,578
1911	964,700	-----	649,745	80,119	61,591	48,200	35,984
1912	1,341,389	-----	1,926,371	178,589	170,818	90,000	105,684
1913	1,763,225	-----	2,374,401	168,720	104,012	130,861	65,167
1914	1,697,401	-----	1,953,367	170,971	44,249	109,082	29,058
1915	1,682,922	-----	1,626,237	125,732	38,878	83,180	23,826
1916	2,172,801	-----	2,335,259	140,544	67,105	107,959	41,950
1917	2,537,829	-----	2,206,868	118,717	51,905	93,818	31,630

*Includes outputs from Alberta and Saskatchewan.

During the year 1909 a strike affecting all the larger mines in the Province lasted for a period of three months.

During the year 1911 a strike affecting all the larger mines in the Province lasted for a period of eight months.

During the year 1917 a strike affecting all the larger mines in the Province lasted for a period of three months.

The following table shows the outputs of the different districts for the years 1916 and 1917:

Districts.	1916			1917		
	Lignite	Bitu- minous	Anth- racite	Lignite	Bitu- minous	Anth- racite
Crow's Nest Pass		1,402,636			1,193,313	
Pincher Creek	3,867			6,804		
Lethbridge	740,022			619,850		
Magrath	1,247			1,011		
Milk River	5,577			9,140		
Taber	139,318			175,666		
Bow Island	4,132			6,846		
Medicine Hat	12,173			14,846		
Aldersyde	7,087			7,339		
High River	1,526			1,096		
Canmore		281,387			196,233	
Banff			140,544			118,717
Drumheller	377,618			660,974		
Big Valley	16,478			29,897		
Brazeau		289,768			266,897	
Brooks	10,917			8,283		
Hanna	25,048			26,064		
Lacombe	18,803			18,223		
Trochu	12,898			14,134		
Three Hills	15,120			24,874		
Carbon	5,091			4,615		
Battle River	10,352			10,544		
Camrose	52,588			61,293		
Tofield	67,063			71,510		
Clover Bar	204,546			263,857		
Edmonton	111,907			120,519		
Namoo	12,379			19,406		
Cardiff	236,433			257,459		
Wabamun	7,475			19,007		
Pembina	72,476			84,349		
Jasper Park		152,504			250,079	
Yellowhead Pass		69,426			146,949	
Mountain Park		139,538			153,397	
Peace River	390			223		
Total	2,172,801	2,335,259	140,544	2,537,829	2,206,868	118,717

The following table indicates how the total outputs of COAL, BRIQUETTES and COKE were disposed of:

	SOLD FOR CONSUMPTION IN					USED				Lifted from Stock	Slack put on Waste Heap	Total Output for Year (including slack)
	Alberta	British Columbia	Saskatchewan	Manitoba	United States	Total Sales	Making Bricks etc.	Making Coke	Under Colliery Boilers			
Lignite	1,152,768	18,798	959,450	150,510	2,473	2,283,999			162,888		90,942	2,537,329
Bituminous	1,638,952	54,035	174,687	99,039	90,337	2,057,050		51,905	98,633	720		2,206,868
Anthracite	21,693	3,564	5,634	323	271	31,485	50,704		26,662		9,866	118,717
Total	2,813,413	76,397	1,139,771	249,872	93,081	4,372,534	50,704	51,905	288,183	720	100,808	4,863,414
Briquettes	73,242	2,653	16,154	1,769								93,818
Coke	199	31,292	34	73	32							31,630

The bituminous coal shown in these tables as being sold for consumption in Alberta includes coal sold to railway companies for the use of locomotives, a considerable percentage of which was probably used in other Provinces.

DEPARTMENT OF PUBLIC WORKS

The following table indicates how the total output of LIGNITE-coal from the Province was disposed of:

Name of District.	SOLD FOR CONSUMPTION IN					Total Sales	Used Under Coll. Boilers	Slack put on Waste Heap	Total Output for Year (including Slack)
	Alberta	British Columbia	Saskatchewan	Manitoba	United States				
Pincher Creek	6,388					6,388			6,804
Lethbridge	201,947	12,088	292,043	44,274	240	550,592	65,726	416	619,850
Magrath	990					990		3,532	1,011
Milk River	8,357		64			8,421		21	9,140
Taber	33,617	3,141	89,222	12,799	1,053	139,832	23,107	12,727	175,666
Bow Island	6,098					6,098		748	6,846
Medicine Hat	3,942					3,942		815	14,846
Aldersyde	6,914		8,440	552	1,042	13,976	55	425	7,339
High River	996					996	30	70	1,096
Drumheller	167,145	1,913	381,184	59,436	138	609,816	29,580	21,578	660,974
Big Valley	18,778		7,228	1,607		27,613	588	1,696	29,897
Brooks	24,843					8,146		137	8,283
Hanna	16,832					24,843	377	844	26,064
Lacombe	12,257		151	30		17,014	20	1,189	18,223
Trochu	13,233		275			12,532	299	1,303	14,134
Three Hills	4,235		3,053	3,932		20,268	976	3,630	24,874
Carbon	9,910					4,235	25	355	4,615
Battle River	42,611		14,581	61		9,910		634	10,544
Camrose	54,071		11,478	1,304		57,253	895	3,145	61,293
Tofield	187,154	23	48,349	6,989		66,853	1,482	3,175	71,510
Clover Bar	87,973		24,173	366		242,515	13,276	8,066	263,857
Edmonton	10,662		4,953	861		112,512	7,569	438	120,519
Namoo	173,685	1,266	40,537	12,117		16,476	413	2,517	19,406
Cardiff	5,333		10,377	1,193		227,605	11,557	18,257	257,459
Wabamun	46,427	367	23,342	4,939		16,903	10	2,094	19,007
Pembina	223					75,075	6,863	2,411	84,349
Peace River						223			223
Total	1,152,768	18,798	959,450	150,510	2,473	2,283,999	162,888	90,942	2,537,829

The following table indicates how the total output of BITUMINOUS coal from the Province was disposed of:

Name of District	SOLD FOR CONSUMPTION IN						USED			Lifted from Stock	Slack put on Waste Heap	Total Output for year (including slack)
	Alberta	British Columbia	Saskatchewan	Manitoba	United States	Total Sales	Making Coke	Under Coll. Boilers	Put to Stock			
Crow's Nest Pass	575,356	46,446	123,888	63,862	90,337	1,082,389	51,905	59,739	---	720	---	1,193,313
Canmore	164,441	4,438	12,001	1,398	---	182,278	---	13,955	---	---	---	196,233
Brazeau	260,126	---	1,170	90	---	261,386	---	5,511	---	---	---	266,897
Jasper Park	244,258	---	861	31	---	245,150	---	4,929	---	---	---	250,079
Yellowhead Pass	76,102	3,130	28,368	30,290	---	137,890	---	9,059	---	---	---	146,949
Mountain Park	136,169	21	8,399	3,368	---	147,957	---	5,440	---	---	---	153,397
Total	1,638,052	54,035	174,687	99,039	90,337	2,057,050	51,905	98,633	---	720	---	2,206,868

The following table indicates how the total outputs of ANTHRACITE, BRIQUETTES and COKE were disposed of:

	SOLD FOR CONSUMPTION IN					Total Sales	USED			Slack put on Stock	Total Output for year (including slack)
	Alberta	British Columbia	Saskatchewan	Manitoba	United States		Making Briquettes	Under Coll. Boilers	Under Coll. Boilers		
Anthracite	21,693	3,564	5,634	323	271	31,485	50,704	26,662	---	9,866	118,717
Briquettes	73,242	2,653	16,154	1,769	---	93,818	---	---	---	---	93,818
Coke	199	31,292	34	73	32	31,630	---	---	---	---	31,630

The Crow's Nest Pass was the only district in which Coke was produced during the year, and Banff in which Briquettes were produced.

The following tables, which show the quantities in tons and values of coals entered for consumption each month during the year 1917 through ports in the Provinces of Manitoba, Saskatchewan and Alberta, and including the ports of Fort Frances, Fort William and Port Arthur, have been compiled from information received from the Commissioner of Customs at Ottawa.

BITUMINOUS SLACK.

District.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Value
Fort Frances	2,721	2,124	2,473	1,547	1,474	1,558	978	1,809	1,698				16,385	\$ 71,861
Fort William	13,003	19,864	11,823	4,820	2,347	5,257	11,522	18,176	14,937				101,749	194,605
Port Arthur	228	87	379	640	9	2,904	2,863	8,640	16,256				32,008	111,272
Brandon	1,959	1,887	1,178	164		99	196	309					5,792	15,454
Gretna	41				1								42	127
Portage la Prairie	319	165	239	116	298	702	698	480	773				3,790	17,591
Winnipeg	4,718	4,091	2,983	1,984	1,514	1,629	2,184	1,393	830				21,326	63,034
Lethbridge														
Moose Jaw							27	30	80				137	677
North Portal														64
Regina								28					28	312
Emerson														
Calgary						22	84		118				224	548
Saskatoon							156	91					247	1,545
Edmonton							60	75	31				166	1,200
Medicine Hat														
Prince Albert														
Total	22,989	28,218	19,075	9,271	5,643	12,171	18,768	31,031	34,723				181,869	\$478,290

BITUMINOUS LUMP.

District.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Value
Fort Frances	7,254	3,608	3,974	2,631	2,336	2,982	2,453	17,835	11,337				55,010	\$ 135,729
Fort William	187,117	45,062	84,287	34,304	97,217	53,933	184,723	194,358	64,557				945,588	1,941,709
Port Arthur	65,896	34,080	40,308	32,579	35,215	71,726	66,010	61,590	94,426				501,830	1,233,645
Brandon	716	583	415	201	278	257	520	792	224				3,983	16,943
Gretna	305	111	639		28	102	110	415	260				1,970	9,393
Portage la Prairie	274	316	264	191	124	63	184	298	259				1,973	9,734
Winnipeg	4,819	4,278	5,672	643	1,674	20,559	27,918	61,892	27,171				154,628	425,828
Lethbridge	1	5	2			40							48	149
Moose Jaw	8		4			10							22	121
North Portal		5			1		4	2					12	55
Regina		1						31					32	5
Emerson								41	86				127	432
Calgary				31									31	228
Total	266,390	88,049	135,565	70,580	137,473	149,672	281,922	337,254	198,320				1,665,225	\$3,773,971

ANTHRACITE.

District.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Value
Port Frances					44,526	68,880	67,290	52,732	39,143				272,571	\$1,609,120
Port William					6,449	16,928	21,778	11,962	19,505				76,222	462,607
Port Arthur					3		125	42	206				2,231	16,484
Brandon	791	648	436			30	31	104	82				473	3,366
Bretna	114	64	48			64			25				401	2,713
Portage la Prairie		158	154			3,154	441	391	80				14,080	94,461
Winnipeg	2,368	4,463	2,200	78	885									
Lethbridge													6	22
Moose Jaw	3		3											
North Portal													3	28
Regina	2		1											
Emerson														
Calgary														715
Total	3,278	5,333	2,842	78	51,863	89,056	89,665	65,231	59,041				366,387	\$2,189,516

From the above tables it will be noted that 2,213,501 tons of coal valued at \$6,441,777.00 were imported into the territory lying between Port Arthur and the western boundary of Alberta. In order to ascertain the value of this coal at the points of entry into Canada, approximately Two Dollars per ton should be added for transportation and other charges, making the total value of the imported coal at these points during the nine months ending September 30th, 1917, approximately \$10,867,779.00.

No particulars, however, are available regarding the amount of coal imported into Western Canada for the three months ending December 31st, 1917, so that complete figures can not be obtained for the whole year.

The following tables give particulars of work done at the Shale Mines in the Province:
BRICKS IN TONS OF 2,000 LBS. SOLD FOR USE IN

Province	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Alberta -----	30	3	45	6	137½	162½	1666	920½	743	78½	30	---	3822
Saskatchewan --	30	32	150	121¼	359	288	246½	458½	69	599	593	947	3893¼
Manitoba -----	---	---	---	---	48	45	45	30	36	---	---	---	204
Total Sales ----	60	35	195	127¼	544½	495½	1957½	1409	848	677½	623	947	7919¼

OUTPUT OF SHALE IN TONS OF 2,000 LBS.
USED FOR MAKING BRICKS

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Medicine Hat --	---	---	200	300	250	---	500	600	640	350	1200	1642	5632

AVERAGE NUMBER OF DAYS

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
	---	---	18	16	9	---	8	8	6	18	20	23	

NUMBER OF MEN EMPLOYED

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Below ground			8	8	8		6	6	6	10	10	21	
Above ground							6	6	6	6	6	11	

MEN EMPLOYED MAKING BRICKS

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
	2	2	10	11	11	6	52	66	74	61	66	74	

Mine Timber used: 780 lineal feet. Explosive used: Dynamite 1,380 lbs. Shots fired by: El. Det., 150. Fuse, 1,400.

COPPER ORE MINE

Number of Men Employed:				Days worked:		Explosives used:		Shots Fired by		Miss-Fires	
Oct.	Nov.	Dec.		Oct.	Nov.	Dec.		Fuse; 450		Fuse; 7	
8	8	8		22	22	25					

The following table shows the total output of LIGNITE Coal in Districts during each month:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Pincher Creek	997	866	773	53	73	472	253	252	389	866	1,099	711	6,804
Lethbridge	65,125	64,528	75,299	34,433	9,434	5,476	45,734	58,069	54,197	66,561	73,399	67,595	619,850
Magrath	80	20	40	3	29	36	127	142	105	132	187	110	1,011
Milk River	775	517	583	590	403	589	535	584	826	1,432	1,600	726	9,140
Taber	20,323	20,431	13,805	3,017	4,176	3,300	10,182	15,128	17,623	21,422	23,910	22,369	175,666
Bow Island	752	531	402	267	262	699	397	344	460	879	1,177	676	6,846
Medicine Hat	2,292	622	459	74	251	820	880	571	1,477	1,662	2,673	3,065	14,846
Aldersyde	885	563	601	349	388	539	317	439	550	861	1,226	641	7,339
High River	202	113	151	113	9	12				100	130	266	1,096
Drumheller	68,013	37,096	32,620	10,730	15,886	31,397	60,448	80,776	72,370	98,921	92,419	60,298	660,974
Big Valley	4,831	2,821	1,964	934	2,329	2,208	2,446	2,758	2,265	1,639	2,392	3,310	29,897
Brooks	860	560	609	245	331	422	457	452	560	1,128	1,938	721	8,283
Hanna	3,450	3,018	2,731	586	822	1,668	713	759	1,599	3,149	5,041	2,528	26,064
Lacombe	3,239	2,200	1,340	552	336	352	451	332	809	2,306	3,552	2,704	18,223
Trochu	1,501	2,178	799	261	288	686	250	784	1,025	1,833	3,107	1,422	14,134
Three Hills	3,278	2,849	1,208	557	706	1,019	1,290	2,062	2,092	3,316	3,931	2,566	24,874
Carbon	484	526	444	111	147	250	320	341	397	358	589	648	4,615
Battle River	2,829	2,733	1,239		75	90			135	330	1,377	1,736	10,544
Camrose	7,886	5,080	2,444	2,513	2,772	3,278	2,883	3,272	4,417	7,716	9,916	9,116	61,293
Tofield	12,581	12,098	4,244	812	267	1,217	2,922	3,690	8,150	7,042	8,348	10,139	71,510
Clover Bar	39,609	34,172	17,174	9,465	9,825	12,876	13,726	16,212	17,812	25,436	31,883	35,661	263,857
Edmonton	14,879	13,607	8,028	5,239	4,756	3,993	4,174	7,937	8,694	13,815	16,836	18,561	120,519
Namoo	3,593	2,466	1,253	675	542	750	557	883	1,048	1,665	3,508	2,466	19,406
Cardiff	35,106	29,499	11,770	6,654	5,505	7,819	14,093	21,799	21,731	30,634	28,448	44,401	257,459
Wabamun	1,600	2,120	2,210			1,540	1,600	1,700	1,700	1,704	2,609	2,224	19,007
Pembina	11,003	9,523	5,475	3,167		5,379	5,393	5,544	4,042	8,533	12,250	14,040	84,349
Peach River	90	23	12								45	53	223
Total	306,263	250,760	187,677	81,400	59,592	86,887	170,128	224,860	224,479	303,440	333,590	308,753	2,537,829

The following table shows the total output of BITUMINOUS coal in districts during each month.

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Crow's Nest Pass	108,046	110,500	147,962	43,578	2,714	3,308	101,967	148,324	129,854	144,033	146,853	106,174	1,193,313
Canmore	23,834	21,132	24,285	9,407	895	931	15,980	23,041	19,545	14,731	21,767	20,685	196,233
Brazeau	17,726	18,576	33,133	21,056	1,387	1,462	27,459	32,505	28,800	26,198	32,371	26,224	266,897
Jasper Park	22,307	20,365	28,448	21,121	14,374	229	14,116	28,013	27,793	29,618	27,557	16,138	250,079
Yellowhead Pass	9,624	10,666	15,842	9,366	8,796	10,659	11,687	13,962	14,091	12,701	16,336	13,219	146,949
Mountain Park	13,635	16,399	16,839	14,866	12,407	1,303	10,089	12,307	11,502	13,361	16,182	14,789	153,397
Total	195,172	197,638	266,509	119,114	40,573	17,892	181,298	258,152	231,585	240,642	261,066	197,227	2,206,868

The following table shows the total output of ANTHRACITE coal during each month :

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Banff	13,539	11,010	13,268	11,387	-----	-----	10,055	12,551	11,037	11,771	12,875	11,224	118,717

The following table shows the total output of COAL, BRIQUETTES and COKE during each month :

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Coal	514,974	459,408	467,454	211,901	100,465	104,779	361,481	495,563	467,101	555,853	607,531	517,204	4,863,414
Briquettes	8,278	8,349	10,374	10,056	23	52	7,797	10,785	9,665	10,221	10,439	7,779	93,818
Coke	4,554	3,276	3,871	2,024	33	-----	1,472	3,056	3,176	4,088	3,964	2,116	31,630

The following table shows the total sales of LIGNITE COAL in Districts, during each month:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Pincher Creek	974	856	770	53	73	472	210	206	356	786	970	689	6,388
Lethbridge	58,014	57,316	67,251	28,969	5,465	2,595	40,765	52,718	48,258	59,557	67,815	61,869	550,592
Magrath	80	20	40	3	20	30	42	141	102	130	187	110	990
Milk River	706	478	551	557	381	563	487	508	760	1,296	1,464	675	8,421
Taber	16,008	16,503	11,019	2,219	3,459	2,965	7,875	12,123	14,121	16,773	19,122	17,645	139,832
Bow Island	695	496	374	226	237	657	345	293	362	774	1,042	607	6,098
Medicine Hat	2,278	616	453	68	239	734	805	519	1,364	1,552	2,526	2,832	13,976
Aldersyde	822	539	572	335	357	516	296	413	516	809	1,135	604	6,914
High River	162	95	144	113	9	12				100	130	231	996
Drumheller	60,594	34,212	28,962	9,332	14,794	29,678	57,175	76,250	67,073	91,535	85,828	54,383	609,816
Big Valley	3,940	2,314	1,544	879	2,270	2,148	2,404	2,714	2,219	1,599	2,350	3,232	27,613
Brooks	804	559	606	241	328	420	446	439	551	1,123	1,923	706	8,146
Hanna	3,256	2,866	2,629	506	748	1,578	672	713	1,482	3,027	4,980	2,386	24,843
Lacombe	2,766	1,950	1,169	537	335	347	424	361	784	2,247	3,559	2,535	17,014
Trochu	1,314	1,914	713	237	254	608	234	758	990	1,594	2,664	1,252	12,532
Three Hills	2,671	2,336	970	449	561	841	1,038	1,708	1,732	2,726	3,241	1,995	20,268
Carbon	405	453	383	106	142	250	281	288	340	355	589	643	4,235
Battle River	2,699	2,653	1,119		70	84			135	310	1,241	1,599	9,910
Camrose	7,316	4,579	2,213	2,366	2,602	3,094	2,708	3,107	4,180	7,235	9,479	8,374	57,253
Tofield	11,747	11,233	3,866	739	234	1,161	2,613	3,221	7,280	6,685	8,117	9,957	66,853
Clover Bar	35,830	31,697	15,295	8,464	8,949	11,952	12,831	15,338	16,797	23,251	29,346	32,665	242,515
Edmonton	13,969	12,848	7,475	4,632	4,149	3,407	3,728	7,491	8,216	12,968	15,934	17,695	112,512
Namoo	3,139	2,152	1,068	555	442	638	461	723	874	1,406	2,921	2,107	16,476
Cardiff	29,560	26,303	9,857	4,798	4,547	7,319	11,639	19,444	18,736	27,325	26,093	41,884	237,605
Wabamun	1,606	2,120	2,210			1,540	1,400	1,600	1,400	1,314	2,009	1,704	16,903
Pembina	10,336	8,935	4,966	2,532		4,699	4,793	4,919	3,547	7,773	10,865	11,710	75,075
Peace River	90	23	12								45	53	223
Total	271,754	226,066	166,231	68,916	50,655	78,298	153,856	206,041	202,215	274,250	305,575	280,142	2,283,999

The following table shows the total sales of BITUMINOUS COAL in Districts during each month:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Crow's N. Pass	95,601	99,232	135,764	36,386	622	490	94,735	137,604	118,992	131,706	135,070	96,137	1,082,389
Canmore	22,352	19,816	22,749	8,661	153	24	14,692	21,678	18,353	13,555	21,707	19,538	182,278
Brazeau	17,350	18,071	32,588	20,561	1,035	1,080	26,805	32,075	28,367	25,708	31,891	25,655	261,386
Jasper Park	21,853	19,936	28,043	20,722	14,254	6	13,904	27,651	27,432	29,071	27,007	15,371	245,150
Yellowhead Pass	8,890	9,853	15,003	8,657	18,097	10,009	11,103	13,351	13,468	11,878	15,504	12,148	137,890
Mountain Park	13,274	15,935	16,369	14,173	11,931	973	9,674	11,894	11,039	12,935	15,655	13,995	147,957
Total	179,239	182,843	250,516	109,160	36,142	12,582	170,963	244,253	217,701	224,853	246,834	182,844	2,057,050

The following table shows the total sales of ANTHRACITE COAL during each month:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Banff	4,377	3,283	3,855	3,114	-----	-----	2,424	3,370	2,926	2,746	3,009	2,381	31,485

The following table shows the total sales of COAL, BRIQUETTES and COKE during each month:

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Coal	455,125	411,901	419,825	181,269	86,797	90,880	327,243	452,664	422,842	501,849	555,418	465,367	4,370,300
Briquettes	8,278	8,349	10,374	10,056	23	52	7,797	10,785	9,665	10,221	10,439	7,779	93,818
Coke	4,554	3,276	3,871	2,024	33	-----	1,472	3,056	3,176	4,088	3,964	2,116	31,630

The following table shows the amount of LIGNITE Coal sold during each month for consumption in Alberta:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Pincher Creek	947	856	770	53	73	472	210	206	356	786	970	689	6,388
Lethbridge	20,910	18,509	23,064	10,396	3,478	2,327	16,078	18,755	17,123	20,688	24,956	25,663	201,947
Magrath	80	20	40	3	20	30	127	141	102	130	187	110	990
Milk River	706	478	551	557	381	563	482	508	760	1,245	1,451	675	8,357
Taber	3,921	3,447	2,094	837	1,851	1,790	1,080	1,178	2,525	4,103	5,842	4,949	33,617
Bow Island	695	496	374	226	237	657	345	293	352	774	1,042	607	6,098
Medicine Hat	678	351	243	8	39	53	95	119	464	647	749	496	3,942
Aldersyde	822	539	572	335	357	516	296	413	516	809	1,135	604	6,914
High River	162	95	144	113	9	12				100	130	231	996
Drumheller	18,731	10,997	7,706	2,748	6,231	7,052	13,856	15,229	16,455	25,600	24,451	18,039	167,145
Big Valley	3,440	1,673	1,218	367	1,130	1,156	1,559	1,929	1,281	1,265	1,780	1,980	18,778
Brooks	804	559	606	241	328	420	446	439	551	1,123	1,923	706	8,146
Hanna	3,256	2,866	2,629	506	748	1,578	672	713	1,482	3,027	4,980	2,386	24,843
Lacombe	2,676	1,890	1,169	537	335	347	424	330	784	2,247	3,559	2,535	16,833
Trochu	1,314	1,914	713	237	254	608	234	758	715	1,594	2,664	1,252	12,257
Three Hills	2,022	1,643	781	420	337	356	530	907	1,567	1,362	2,064	1,244	13,233
Carbon	405	453	383	106	142	250	281	288	340	355	589	643	4,235
Battle River	2,699	2,653	1,119		70	84			135	310	1,241	1,599	9,910
Camrose	4,652	3,241	1,852	2,069	2,042	2,341	1,229	1,799	3,135	5,962	7,676	6,613	42,611
Tofield	8,865	9,853	3,569	713	234	974	2,455	2,945	5,529	5,188	5,982	7,764	54,071
Clover Bar	28,984	25,921	13,777	7,430	8,418	8,820	8,297	9,325	10,764	17,325	20,466	27,577	187,154
Edmonton	10,669	9,831	6,795	4,442	3,993	3,231	2,584	4,938	5,441	10,563	12,063	13,423	87,973
Namoo	1,494	1,077	728	525	408	363	238	529	622	1,261	2,073	1,344	10,662
Cardiff	20,014	19,689	8,307	3,909	3,444	4,469	8,571	13,400	14,207	21,692	19,959	36,024	173,865
Wabamun	796	320	620			140	800	700	600	436	413	508	5,333
Pembina	7,811	5,450	2,846	2,024		1,026	2,269	2,978	2,865	5,092	7,198	6,868	46,427
Peace River	90	23	12								45	53	223
Total	147,743	124,844	82,682	38,852	34,559	39,635	63,158	78,820	88,671	133,684	155,588	164,632	1,152,768

DEPARTMENT OF PUBLIC WORKS

The following table shows the amount of LIGNITE Coal sold during each month for consumption in British Columbia:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Pincher Creek													
Lethbridge	1,176	1,441	1,374	497			1,142	1,388	1,111	1,305	1,475	1,179	12,088
Magrath													
Milk River													
Taber	369	445	261	33	106	61	72	114	351	419	533	377	3,141
Bow Island													
Medicine Hat													
Aldersyde													
High River													
Drumheller													
Big Valley	73					104	480	217	282	277	371	109	1,913
Brooks													
Hanna													
Lacombe													
Trochu													
Three Hills													
Carbon													
Battle River													
Camrose													
Tofield													
Clover Bar		23											23
Edmonton													
Namoo													
Cardiff	330	297	99										
Wabamun													
Pembina	58		64				31						
Peace River													
Total	2,006	2,206	1,798	530	106	165	1,725	1,719	1,744	2,391	2,559	1,849	18,798

The following table shows the amount of LIGNITE Coal sold during each month for consumption in Saskatchewan:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Pincher Creek	31,553	32,038	37,980	16,456	1,911	268	20,964	27,302	25,648	32,497	34,846	30,580	292,043
Lethbridge													
Magrath													
Milk River	9,951	10,062	6,707	1,031	1,257	1,052	5,965	10,177	10,282	11,193	11,146	10,399	89,222
Taber										51	13		64
Bow Island													
Medicine Hat	1,600	265	210	60	190	631	680	400	900	825	1,120	1,559	8,440
Aldersyde													
High River													
Drumheller	39,240	20,333	19,659	5,732	6,848	19,753	39,676	54,271	43,017	54,067	49,963	28,625	381,184
Big Valley	500	610	326	352	948	736	845	785	743	209	157	1,017	7,228
Brooks													
Hanna													
Lacombe	90	30						31					151
Trochu									275				275
Three Hills	527	134	25		70		357	741	62	317	510	310	3,053
Carbon													
Battle River													
Camrose	2,664	1,338	361	297	560	753	1,479	1,308	1,045	1,243	1,803	1,730	14,581
Tofield	2,796	1,355	297	26		187	188	245	1,684	1,184	1,779	1,767	11,478
Clover Bar	6,531	5,520	1,426	917	531	3,073	4,011	4,830	4,938	4,771	7,701	4,100	48,349
Edmonton	3,300	3,017	680	158	156	176	1,078	2,515	2,660	2,380	3,781	4,272	24,173
Namoo	1,227	1,075	340	30	34	265	223	194	252	145	670	498	4,953
Cardiff	7,380	5,977	1,286	829	973	1,220	2,502	5,206	3,099	3,889	4,822	3,354	40,537
Wabamun	810	1,800	1,410			1,280	600	800	800	541	1,172	1,164	10,377
Pembina	2,068	2,925	1,803			3,294	2,373	1,333	373	2,203	2,771	3,691	23,342
Peace River													
Total	110,237	86,479	72,510	26,396	13,478	32,688	80,911	110,138	95,778	115,515	122,254	93,066	959,450

The following table shows the amount of LIGNITE Coal sold during each month for consumption in Manitoba :

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Pincher Creek	4,315	5,268	4,713	1,620	76		2,581	5,273	4,376	5,067	6,538	4,447	44,274
Lethbridge													
Magrath													
Milk River	1,767	2,431	1,672	240	202		684	654	892	890	1,477	1,890	12,799
Taber													
Bow Island													
Medicine Hat													
Aldersyde											272	280	552
High River													
Drumheller	2,550	2,882	1,597	852	1,715	2,769	3,163	6,533	7,319	11,553	11,043	7,460	59,436
Big Valley		31		160	192	256			195	125	413	235	1,607
Brooks													
Hanna													
Lacombe		30											30
Trochu													
Three Hills	122	559	164	29	154	485	151	60	103	1,047	667	441	3,982
Carbon													
Battle River													
Camrose													
Tofield	86	25								30		31	61
Clover Bar	315	233	92	67		59	573	31	67	313	356	426	1,304
Edmonton				32			66	1,233	1,095	1,155	1,179	988	6,989
Namoo	418							38	115	25	90		366
Cardiff	1,836	340	165	60	130	1,630	620	834	1,480	1,504	178	265	861
Wabamun			180			120		100		337	1,132	2,386	12,117
Pembina	399	560	253			379	120	608	309	328	424	32	1,193
Peace River											896	1,087	4,939
Total	11,808	12,359	8,836	3,060	2,469	5,698	7,958	15,364	15,951	22,374	24,665	19,968	150,510

The following table shows the amount of LIGNITE Coal sold during each month for consumption in United States:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Pincher Creek													
Lethbridge	60	60	120										240
Magrath													
Milk River													
Taber		118	285	78	43	62	74		71	168	124	30	1,053
Bow Island													
Medicine Hat						50	30			80	385	497	1,042
Aldersyde													
High River													
Drumheller													
Big Valley										38		100	138
Brooks													
Hanna													
Lacombe													
Trochu													
Three Hills													
Carbon													
Battle River													
Camrose													
Tofield													
Clover Bar													
Edmonton													
Namoo													
Cardiff													
Wabamun													
Pembina													
Peace River													
Total	60	178	405	78	43	112	104		71	286	509	627	2,473

The following table shows the amount of BITUMINOUS Coal sold during each month for consumption in Alberta:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Crow's Nest ---	68,881	78,692	95,754	27,145	589	457	60,838	88,066	77,178	95,025	92,582	72,649	757,856
Canmore -----	20,005	17,595	20,998	8,105	153	24	12,377	19,354	16,788	12,234	18,675	18,133	164,441
Brazeau -----	16,972	18,071	32,209	20,561	705	1,020	26,972	32,075	28,287	25,708	31,891	25,655	260,126
Jasper Park ---	21,230	19,936	28,043	20,591	14,016	6	13,904	27,651	27,432	29,071	27,007	15,371	244,258
Yellowhead Pass	6,977	9,390	14,457	7,065	2,884	3,519	3,745	4,651	5,611	4,426	7,591	5,786	76,102
Mountain Park -	13,274	15,935	16,369	14,173	11,961	973	9,674	11,428	9,153	11,646	11,431	10,152	136,169
Total -----	147,339	159,619	207,830	97,640	30,308	5,999	127,510	183,225	164,449	178,110	189,177	147,746	1,638,052

The following table shows the amount of BITUMINOUS Coal sold during each month for consumption in British Columbia:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Crow's Nest ---	6,610	5,663	18,669	2,848	---	---	1,003	2,073	2,462	1,740	3,931	1,447	46,446
Canmore -----	348	449	259	85	---	---	552	190	421	925	631	578	4,438
Brazeau -----	---	---	---	---	---	---	---	---	---	---	---	---	---
Jasper Park ---	---	---	---	---	---	---	---	---	---	---	---	---	---
Yellowhead Pass	1,795	463	426	60	60	---	60	120	60	---	25	61	3,130
Mountain Park -	---	---	---	---	20	---	---	1	---	---	---	---	21
Total -----	8,753	6,575	19,354	2,993	80	---	1,615	2,384	2,943	2,665	4,587	2,086	54,035

The following table shows the amount of BITUMINOUS coal sold during each month for consumption in Saskatchewan:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Crow's Nest	17,352	11,473	16,718	3,317	33	33	13,476	17,612	13,369	10,286	8,451	11,768	123,888
Canmore	1,669	1,591	960	279			1,721	2,090	1,144	396	1,324	827	12,001
Brazeau	378		379		240	60	33		80				1,170
Jasper Park	623			100	138								861
Yellowhead Pass			120	451	2,128	3,206	3,677	3,315	5,906	3,631	2,810	3,087	28,368
Mountain Park	37							408	1,125	497	3,422	2,947	8,399
Total	20,059	13,064	18,177	4,147	2,539	3,299	18,970	23,425	21,624	14,810	16,007	18,629	174,687

The following table shows the amount of BITUMINOUS coal sold during each month for consumption in Manitoba:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Crow's Nest	2,276	850	937	1,745			14,757	16,233	12,290	8,407	4,515	1,852	63,862,
Canmore	330	181	532	192			42	44			77		1,398
Brazeau					90								90
Jasper Park				31									31
Yellowhead Pass				1,081	3,025	3,284	3,621	5,265	1,891	3,831	5,078	3,214	30,290
Mountain Park								57	811	792	812	896	3,368
Total	2,606	1,031	1,469	3,049	3,115	3,284	18,420	21,599	14,992	13,030	10,482	5,962	99,039

The following table shows the amount of BITUMINOUS coal sold during each month for consumption in United States :

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Crow's Nest	482	2,554	3,686	1,331			4,711	13,620	13,693	16,248	25,591	8,421	90,337
Canmore													
Brazeau													
Jasper Park													
Yellowhead Pass													
Mountain Park													
Total	482	2,554	3,686	1,331			4,711	13,620	13,693	16,248	25,591	8,421	90,337

The following table shows the amount of Anthracite Coal, Briquettes and Coke respectively sold during each month for consumption in Alberta :—

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Anthracite	2,709	1,878	2,932	2,974			1,692	2,214	1,847	1,750	1,936	1,761	21,693
Briquettes	4,024	6,004	9,851	9,882	23	52	5,835	8,023	7,362	8,009	7,793	6,384	73,242
Coke	40	36	27							30		66	199

The following table shows the amount of Anthracite Coal, Briquettes and Coke respectively sold during each month for consumption in British Columbia :—

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Anthracite	457	358	209	6			467	505	430	455	440	237	3,564
Briquettes	572	281	99	20			317	134	416	480	205	129	2,653
Coke	4,474	3,240	3,344	2,024			1,472	3,056	3,176	4,058	3,964	1,984	31,292

DEPARTMENT OF PUBLIC WORKS

The following table shows the amount of LIGNITE Coal used during each month under Colliery Boilers:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Pincher Creek													
Lethbridge	6,509	6,592	7,258	5,454	3,955	3,578	4,729	4,663	5,305	6,036	5,755	5,892	65,726
Magrath													
Milk River													
Taber	2,220	2,175	1,725	1,361	1,296	1,174	1,815	1,875	2,210	2,428	2,425	2,403	23,107
Bow Island													
Medicine Hat	10	6	6										
Aldersyde													
High River	12												
Drumheller	2,907	1,924	1,846	1,375	1,262	1,464	2,579	3,331	3,297	3,236	3,231	3,138	29,580
Big Valley	60	55	60	50	55	50	42	44	46	40	42	44	588
Brooks													
Hanna	29	27	28	25	25	28	28	28	50	36	37	36	377
Lacombe													
Trochu	30	30	11	8	10	20	10	20	25	10	10		20
Three Hills	91	88	56	20	28	34	89	90	91	40	65	30	299
Carbon	5	5	5	5	5					119	120	150	976
Battle River													25
Camrose	80	75	72	65	72	79	75	75	77	75	75	75	895
Tofield	89	66	59	23	28	35	180	180	180	331	180	131	1,482
Clover Bar	1,330	1,217	1,098	678	726	834	805	769	941	1,645	1,576	1,657	13,276
Edmonton	734	689	434	582	587	566	515	557	540	778	791	796	7,569
Namoo	42	36	34	35	32	28	28	36	39	23	38	42	413
Cardiff	1,220	980	895	850	775	800	800	830	925	1,238	1,080	1,204	11,597
Wabamun													
Pembina													
Peace River	667	588	509	403		500	600	625	495	760	749	967	6,863
Total	16,035	14,556	14,096	10,334	8,856	9,190	12,295	13,125	14,229	16,805	16,171	16,596	162,888

The following table shows the amount of BITUMINOUS Coal used during each month under Colliery Boilers:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
C. N. Pass	5,615	5,418	6,036	3,742	2,092	2,818	5,102	5,719	5,442	5,871	5,748	6,136	59,739
Canmore	1,482	1,316	1,536	746	742	907	1,238	1,363	1,192	1,176	1,060	1,147	13,955
Brazeau	376	505	544	495	352	382	454	430	433	491	480	569	5,511
Jasper Park	454	429	405	399	220	223	212	362	361	547	550	767	4,929
Yellowhead Pass	815	813	839	709	699	650	584	611	623	813	832	1,071	9,059
Mountain Park	361	464	470	413	426	330	415	413	413	426	517	792	5,440
Total	9,103	8,945	9,830	6,504	4,531	5,310	8,055	8,898	8,464	9,324	9,187	10,482	98,633

The following table shows the amount of ANTHRACITE Coal used during each month under Colliery Boilers:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Banff	2,893	2,436	3,169	2,723	-----	-----	2,973	2,724	2,255	2,474	2,684	2,331	26,662

OUTPUTS AND NUMBER OF MINES PRODUCING.

	Under 10,000 Tons.		From 10,000 to 50,000 Tons.		From 50,000 to 100,000 Tons.		From 100,000 to 200,000 Tons.		From 200,000 to 300,000 Tons.		From 300,000 to 400,000 Tons.		Total.
	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	
Lignite	223	197,557	24	522,971	13	972,739	4	517,648			1	326,914	2,537,829
Bituminous			5	124,789	2	141,391	5	788,403					2,206,868
Anthracite							1	118,717					118,717
Total	223	197,557	29	647,760	15	1,114,130	10	1,424,768	5	1,152,285	1	326,914	4,863,414

In addition to the mines shown in above table as being in operation, one copper mine and two shale mines were operated during the year 1917.

The following table shows the classification of persons employed in the LIGNITE, BITUMINOUS and ANTHRACITE Coal Fields, at December 31st, 1917:

	UNDERGROUND.						ABOVE GROUND.						Total under-ground and above ground	
	Supervision	Miners and Helpers	Haulage Employees	Mechanics and Skilled Labor	Others	Total	Supervision	Mechanics and Skilled Labor	Clerical Assistance	Others	Coke Ovens	Briquette Plant		Total
Lignite	225	2,767	632	226	326	4,176	113	404	94	992			1,603	5,779
Bituminous	130	1,435	419	30	680	2,694	47	240	54	691	20		1,052	3,746
Anthracite	9	87	7		25	128	5	39	8	97		10	159	287
Total	364	4,289	1,058	256	1,031	6,998	165	683	156	1,780	20	10	2,814	9,812

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The following table shows the average number of persons employed during each month in the LIGNITE Coal Field, above and below ground:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Pincher Creek	17	20	17	3	5	14	9	9	11	21	24	23
Lethbridge	1,458	1,333	1,334	1,047	560	299	1,075	1,138	1,167	1,281	1,390	1,483
Magrath	8	3	3	2	2	3	7	7	7	7	7	8
Milk River	23	19	18	24	23	27	25	28	28	34	39	34
Taber	449	422	384	317	209	134	317	324	365	407	433	458
Bow Island	30	25	18	14	14	17	15	16	17	18	21	23
Medicine Hat	72	60	27	14	18	21	25	34	37	48	64	68
Aldersyde	27	25	23	20	21	21	19	19	24	26	26	26
High River	6	6	4	3						3	7	11
Drumheller	1,077	958	680	441	481	616	1,143	1,278	1,433	1,581	1,659	1,642
Big Valley	65	45	27	25	30	31	32	40	38	34	41	51
Brooks	28	25	20	7	8	9	12	14	14	40	48	44
Hanna	67	61	50	24	24	25	32	24	41	56	62	69
Lacombe	52	49	33	23	19	18	27	24	38	62	82	79
Trochu	43	43	34	17	17	19	23	26	30	34	47	52
Three Hills	43	43	25	20	25	32	34	40	43	55	73	61
Carbon	13	13	13	13	11	13	7	7	9	15	16	17
Battle River	43	44	30		2	2			6	9	33	41
Camrose	106	97	64	45	54	53	60	63	59	96	125	130
Tofield	145	148	70	44	50	67	77	89	128	133	115	128
Clover Bar	388	386	298	164	150	181	214	246	257	318	395	461
Edmonton	234	239	179	137	146	147	138	157	174	197	227	266
Namoo	60	51	22	15	14	14	13	18	23	31	54	45
Cardiff	333	307	165	134	121	166	199	216	230	290	355	346
Wabamun	61	37	18			18	28	31	32	51	50	47
Pembina	130	128	105	90	48	76	78	79	76	121	157	165
Peace River	5	2	2							2	1	1
Total	4,983	4,589	3,663	2,643	2,052	2,023	3,609	3,936	4,287	4,970	5,551	5,779

The following table shows the average number of persons employed during each month in the BITUMINOUS Coal Field, above and below ground:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Crow's Nest Pass --	1,790	1,748	1,804	1,196	310	299	1,608	1,797	1,799	1,851	1,932	1,916
Canmore -----	304	305	302	269	105	105	241	293	275	220	289	292
Brazeau -----	389	390	394	321	64	62	353	379	384	440	430	433
Jasper Park -----	391	349	389	299	363	133	389	403	436	511	532	525
Yellowhead Pass ---	215	207	209	179	190	221	227	233	255	268	265	279
Mountain Park -----	194	242	195	209	191	164	194	211	222	234	276	301
Total -----	3,283	3,241	3,294	2,473	1,223	984	3,012	3,316	3,371	3,524	3,724	3,746

The following table shows the average number of persons employed during each month in the ANTHRACITE Coal Field, above and below ground:

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Banff -----	284	267	261	261	113	84	302	298	278	280	285	287

The following table shows the average number of persons employed during each month in the LIGNITE, BITUMINOUS and ANTHRACITE Coal Fields, above and below ground:

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Lignite -----	4,983	4,589	3,663	2,643	2,052	2,023	3,609	3,936	4,287	4,970	5,551	5,779
Bituminous -----	3,283	3,241	3,294	2,473	1,223	984	3,012	3,316	3,371	3,524	3,724	3,746
Anthracite -----	284	267	261	261	113	84	302	298	278	280	285	287
Total -----	8,550	8,097	7,218	5,377	3,388	3,091	6,923	7,550	7,936	8,774	9,560	9,812

PER CAPITA PRODUCTION OF MINES IN THE PROVINCE

Year	Gross tons of coal mined	Total No. of men employed	Tons of coal mined per man	No. of men employed undergr'nd	Tons of coal mined per man empl'd undergr'nd
1906	1,385,000	2,800	494	2,000	692
1907	1,834,745	3,600	509	2,700	679
1908	1,845,000	3,780	488	2,681	688
*1909	2,174,329	5,207	417	3,893	566
1910	3,036,757	5,818	504	4,090	742
** 1911	1,694,564	6,689	253	4,517	375
1912	3,446,349	6,661	517	4,861	708
1913	4,306,346	8,068	533	5,837	737
1914	3,821,739	8,170	467	6,052	631
1915	3,434,891	6,445	532	4,493	764
1916	4,648,604	7,570	614	5,536	839
1917	4,863,414	8,310	595	6,047	804

*During the year 1909 a strike affecting all the larger mines in the Province lasted for a period of three months.

**During the year 1911 a strike affecting all the larger mines in the Province lasted for a period of eight months.

During the year 1917 a strike affecting all the larger mines in the Province lasted for a period of three months.

PER CAPITA PRODUCTION OF MINES IN THE LIGNITE COAL FIELD

Year	Gross tons of coal mined	No. of men employed undergr'nd	Total No. of men employed	Tons of coal mined per man empl'd undergr'nd	Tons of coal mined per man employed
1910	878,011	1,676	2,307	524	380
1911	964,700	2,488	3,548	391	271
1912	1,341,389	2,283	2,980	587	450
1913	1,763,225	2,929	4,017	601	438
1914	1,697,401	3,190	4,219	532	402
1915	1,682,922	2,210	3,181	761	529
1916	2,172,801	3,137	4,132	692	525
1917	2,537,829	3,489	4,701	727	539

PER CAPITA PRODUCTION OF MINES IN THE BITUMINOUS COAL FIELD.

Year	Gross tons of coal mined	No. of men employed undergr'nd	Total No. of men employed	Tons of coal mined per man empl'd undergr'nd	Tons of coal mined per man employed
1910	1,896,961	2,076	2,981	914	636
1911	649,745	1,820	2,641	357	246
1912	1,926,871	2,353	3,243	818	594
1913	2,374,401	2,645	3,562	897	666
1914	1,953,367	2,632	3,529	742	553
1915	1,626,237	2,103	2,921	773	557
1916	2,335,259	2,258	3,142	1,034	743
1917	2,206,868	2,429	3,335	909	661

PER CAPITA PRODUCTION OF MINES IN THE ANTHRACITE COAL FIELD.

Year	Gross tons of coal mined	No. of men employed undergr'nd	Total No. of men employed	Tons of coal mined per man empl'd undergr'nd	Tons of coal mined per man employed
1910	261,785	338	530	774	493
1911	80,119	209	500	383	160
1912	178,589	225	438	793	407
1913	168,720	263	489	641	345
1914	170,971	230	422	743	405
1915	125,732	180	343	698	366
1916	140,544	141	296	996	474
1917	118,717	129	284	920	418

The tables showing the number of men employed in the Bituminous Coal field include employees at the coke ovens, and in the Anthracite field employees at the briquetting plant.

PER CAPITA PRODUCTION OF MINES IN THE LIGNITE COAL FIELD BY DISTRICTS.

District	Gross tons of coal mined	No. of men employed undergr'nd	Total No. of men employed	Tons of coal mined per man empl'd undergr'nd	Tons of coal mined per man employed
Pincher Creek -----	6,804	19	21	358	324
Lethbridge -----	619,850	956	1,327	637	465
Magrath -----	1,011	11	12	92	85
Milk River -----	9,140	37	44	247	208
Taber -----	175,666	320	408	549	431
Bow Island -----	6,846	23	26	298	271
Medicine Hat -----	14,846	36	49	424	303
Aldersyde -----	7,339	26	28	282	262
High River -----	1,096	9	10	122	109
Drumheller -----	660,974	841	1,203	785	549
Big Valley -----	29,897	32	42	934	712
Brooks -----	8,283	29	32	286	259
Hanna -----	26,064	53	69	494	377
Lacombe -----	18,223	63	78	289	234
Trochu -----	14,134	36	45	394	314
Three Hills -----	24,874	37	47	672	529
Carbon -----	4,615	20	22	231	209
Battle River -----	10,544	46	47	229	223
Camrose -----	61,293	72	93	851	659
Tofield -----	71,510	99	103	722	694
Clover Bar -----	263,857	242	333	1,090	792
Edmonton -----	120,519	156	201	772	599
Namoo -----	19,406	35	42	554	462
Cardiff -----	257,459	189	261	1,309	968
Wabamun -----	19,007	39	52	487	369
Pembina -----	84,349	62	105	1,360	803
Peace River -----	223	1	1	223	223
Total -----	2,537,829	3,489	4,701	727	539

PER CAPITA PRODUCTION OF MINES IN THE BITUMINOUS COAL FIELD
BY DISTRICTS.

District	Gross tons of coal mined	No. of men employed undergr'nd	Total No. of men employed	Tons of coal mined per man empl'd undergr'nd	Tons of coal mined per man employed
Crow's Nest Pass---	1,193,313	1,321	1,767	903	675
Canmore -----	196,233	194	288	1,011	685
Brazeau -----	266,897	303	397	880	672
Jasper Park -----	250,079	305	419	819	599
Yellowhead Pass ---	146,947	152	224	967	661
Mountain Park -----	153,397	154	240	996	639
Total -----	2,206,868	2,429	3,335	909	661

PER CAPITA PRODUCTION OF MINES IN THE ANTHRACITE COAL FIELD
BY DISTRICTS.

District	Gross tons of coal mined	No. of men employed undergr'nd	Total No. of men employed	Tons of coal mined per man empl'd undergr'nd	Tons of coal mined per man employed
Banff -----	118,717	129	284	920	418

DEPARTMENT OF PUBLIC WORKS

The following table shows the number of days in each month on which ANTHRACITE Coal was drawn :

Name of District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total No. of days worked
Pincher Creek	18	19	17	16	15	21	22	22	21	20	24	16	231
Lethbridge	20	21	22	18	13	12	21	23	21	22	23	23	239
Magrath	8	3	4	12	8	8	14	25	21	23	25	23	174
Milk River	22	16	14	15	12	18	13	16	18	23	22	18	209
Taber	20	20	18	12	14	13	14	17	18	23	20	21	210
Bow Island	18	14	13	13	12	19	14	13	13	19	19	15	182
Medicine Hat	18	17	13	13	16	21	15	19	22	23	17	18	212
Aldersyde	19	20	21	15	16	20	15	15	20	23	23	19	226
High River	25	15	21	24	16	19	21	22	20	24	20	21	150
Drumheller	19	14	13	16	21	20	18	21	20	24	21	15	220
Big Valley	23	23	14	18	21	20	18	21	22	25	22	23	250
Brooks	22	19	17	14	14	14	18	21	17	22	19	20	217
Hanna	19	18	18	14	17	20	16	16	24	21	22	19	224
Lacombe	17	14	11	19	16	19	15	21	17	21	21	20	211
Trochu	22	21	16	10	10	17	12	15	19	19	19	19	199
Three Hills	20	19	14	13	12	17	18	15	16	16	21	19	200
Carbon	18	20	19	7	6	8	23	25	25	20	23	23	217
Battle River	23	25	12	11	11	11	25	24	12	19	18	20	151
Camrose	23	19	12	22	23	20	19	24	25	26	24	21	264
Tofield	26	25	22	17	13	18	19	21	24	23	25	25	258
Clover Bar	26	24	21	17	17	18	19	23	23	24	23	24	259
Edmonton	26	23	25	22	22	22	21	25	21	24	24	20	275
Namoo	24	17	15	23	26	22	17	17	19	23	21	21	245
Cardiff	23	21	14	18	14	16	18	23	21	25	23	23	239
Wabamun	23	20	16	14	14	22	22	24	23	18	22	19	209
Pembina	26	23	15	14	14	26	25	23	19	26	26	23	246
Peace River										10	26	26	62
Average No. of days worked	21.08	16.84	16.01	15.91	15.04	17.64	18.12	20.25	20.12	21.3	21.9	20.5	17.8

The following table shows the number of days in each month on which BITUMINOUS Coal was drawn:

Name of District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total No. of days worked
Crow's Nest ---	18	22	26	8	-----	-----	24	26	23	25	25	23	220
Canmore -----	26	24	27	13	-----	-----	25	27	24	26	24	24	240
Brazeau -----	22	22	27	22	25	24	25	26	24	22	26	24	287
Jasper Park -----	24	23	27	21	13	-----	11	23	24	24	21	17	228
Yellowhead Ps. ---	26	24	22	21	24	25	25	27	25	20	25	22	286
Mountain Park ---	26	24	27	24	25	3	25	19	25	26	26	23	273
Average No. of days worked	24	23	26	18	22	17	22	25	24	24	24	22	21.3

The following table shows the number of days in each month on which LIGNITE Coal was drawn:

Name of District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Banff -----	13	12	14	12	-----	-----	16	14	12	12	12	12	12.9

The following table shows the amount of mine timber used during the year:

LIGNITE COAL FIELD.

Districts	Round timber Lineal feet	Square timber Square feet B.M.	Slabs Cords	Cordwood No. of Cords
Pincher Creek -----	14,678			
Lethbridge -----	2,796,356	1,972,784	527	565
Magrath -----	9,814			
Milk River -----	30,071			
Taber -----	393,016	37,746		
Bow Island -----	27,368			
Medicine Hat -----	28,138		4	
Aldersyde -----	34,306	16,520		
High River -----	2,330			
Drumheller -----	1,344,990		94	
Big Valley -----	75,946			
Brooks -----	27,718		3	
Hanna -----	36,581			
Lacombe -----	58,576			
Trochu -----	21,111		1	
Three Hills -----	39,298			
Carbon -----	5,565			
Battle River -----	20,398			
Camrose -----	184,630			
Tofield -----	7,800			
Clover Bar -----	732,794			
Edmonton -----	386,255		125	
Namao -----	69,712			
Cardiff -----	333,305			
Wabamun -----	57,399			
Pembina -----	287,350			
Peace River -----				
Total -----	7,025,505	2,027,050	754	565

BITUMINOUS COAL FIELD.

Districts	Round timber Lineal feet	Square timber Square feet B.M.	Slabs Cords	Cordwood No. of Cords
Crow's Nest Pass -----	1,702,492	620,342	940	
Canmore -----	167,750		1,200	
Brazeau -----	777,206		1,740	
Jasper Park -----	1,184,276		1,500	
Yellowhead Pass -----	418,701		850	
Mountain Park -----	727,438			
Total -----	4,977,863	620,342	6,230	

ANTHRACITE COAL FIELD.

Districts	Round timber Lineal feet	Square timber Square feet B.M.	Slabs Cords	Cordwood No. of Cords
Banff -----	443,499			

EXPLOSIVES

The following table shows the quantity of Explosives used in pounds for blasting coal in the LIGNITE Coal Field:

District	NAME OF EXPLOSIVE						Total
	Monobel No. 1	Black Powder	Polar Permi- tite	Dyna- mite	Stump- ing Powder	Brush- ite	
Pincher Creek	593	1,190	1,160				2,943
Lethbridge	17,325	66,466		13,769		185	97,745
Magrath		560					560
Milk River	100	7,243		131			7,474
Taber		54,843					54,843
Bow Island		5,685					5,685
Medicine Hat		13,680					13,680
Aldersyde	10	2,582					2,592
High River	125	60		40			225
Drumheller	41,870	306,358		1,150			349,378
Big Valley		1,365					1,365
Brooks		5,373					5,373
Hanna	30	11,173		50			11,253
Lacombe		7,424					7,424
Trochu		7,007		15			7,022
Three Hills	86	9,662					9,748
Carbon		1,977					1,977
Battle River		400					400
Camrose		726		449			1,175
Tofield		2,221		2,327	275		4,823
Clover Bar	8,634	46,199					54,833
Edmonton	15,169	12,689			4		27,862
Namoo	25						25
Cardiff	13,629	51,362			10,000		74,991
Wabamun	410						410
Pembina	11,425	852					12,277
Peace River					2		2
Total	109,431	617,097	1,160	17,931	10,281	185	756,085

The following table shows the quantity of Explosives used in pounds for blasting coal in the BITUMINOUS Coal Field:

District	NAME OF EXPLOSIVE						Total
	Monobel No. 1	Polar Permi- tite	Dyna- mite	Viking No. 1			
Crow's Nest Pass	90,648	8,073	86				98,807
Canmore	39,315						39,315
Brazeau	4,189	205		50			4,444
Jasper Park	17,262	1,417					18,679
Yellowhead Pass	48,519	3,813		4,600			56,932
Mountain Park	16,653						16,653
Total	216,586	13,508	86	4,650			234,830

The following table shows the quantity of Explosives used in pounds for blasting coal in the ANTHRACITE Coal Field:

District	NAME OF EXPLOSIVE						Total
	Monobel No. 1						
Banff	17,832						17,832

The following table shows the number of tons of LIGNITE coal produced per pound of explosive used for blasting coal:

District	No. of Tons Mined	No. of Lbs. of Explosive used.	Tons of coal mined per Lb. of Explosive used
Pincher Creek -----	6,804	2,943	2.3
Lethbridge -----	619,850	97,745	6.3
Magrath -----	1,011	560	1.8
Milk River -----	9,140	7,474	1.2
Taber -----	175,666	54,843	3.2
Bow Island -----	6,846	5,685	1.2
Medicine Hat -----	14,846	13,680	1.1
Aldersyde -----	7,339	2,592	2.8
High River -----	1,096	225	4.9
Drumheller -----	660,974	349,378	1.9
Big Valley -----	29,897	1,365	21.9
Brooks -----	8,283	5,373	1.6
Hanna -----	26,064	11,253	2.3
Lacombe -----	18,223	7,424	2.4
Trochu -----	14,134	7,022	2.0
Three Hills -----	24,874	9,748	2.5
Carbon -----	4,615	1,977	2.3
Battle River -----	10,544	400	26.3
Camrose -----	61,293	1,175	52.1
Tofield -----	71,510	4,823	14.8
Clover Bar -----	263,857	54,833	4.8
Edmonton -----	120,519	27,862	4.3
Namoo -----	19,406	25	776.2
Cardiff -----	257,459	74,991	3.4
Wabamun -----	19,007	410	46.3
Pembina -----	84,349	12,277	6.8
Peace River -----	223	2	112.5
Total -----	2,537,829	756,085	3.4

The following table shows the number of tons of BITUMINOUS coal produced per pound of explosive used for blasting coal.

District	No. of Tons mined	No. of Lbs. of Explosive used	Tons of coal mined per Lb. of Explosive used
Crow's Nest Pass -----	1,193,313	98,807	12.1
Canmore -----	196,233	39,315	4.9
Brazeau -----	266,897	4,444	60.1
Jasper Park -----	250,079	18,679	13.4
Yellowhead Pass -----	146,949	56,932	2.6
Mountain Park -----	153,397	16,653	9.2
Total -----	2,206,868	234,830	9.4

The following table shows the number of tons of ANTHRACITE coal produced per pound of explosive used for blasting coal.

District	No. of Tons mined	No. of Lbs. of Explosive used	Tons of coal mined per Lb. of Explosive used
Banff -----	118,717	17,832	6.6

Estimated number of shots fired for blasting coal in the LIG-NITE Coal Field:

District	Squibs	Fuse	Electric Detonator	Electric Squib	Total
Pincher Creek	605	2,527			3,132
Lethbridge	34,171	15,382	22,151	29,554	101,258
Magrath	927				927
Milk River	11,098	836			11,934
Taber	49,736				49,736
Bow Island	7,239				7,239
Medicine Hat	2,855				2,855
Aldersyde	4,285	23			4,308
High River		320			320
Drumheller	26,154	207,620	58,890		292,664
Big Valley		975			975
Brooks	3,030	1,180			4,210
Hanna	1,855	18,620	50		20,525
Lacombe	3,015	5,539			8,554
Trochu	1,584	15,155	10		16,749
Three Hills	1,663	7,823			9,486
Carbon	2,785	15			2,798
Battle River	300	40			340
Camrose		500	912		1,412
Tofield	20	3,889			3,909
Clover Bar		31,886	7,398		39,284
Edmonton		20,041	28,532		48,573
Namoo		78			78
Cardiff		63,635			63,635
Wabamun		1,160			1,160
Pembina			14,769	614	15,383
Peace River		4			4
Total	151,320	397,248	132,712	30,168	711,448

Estimated number of shots fired for blasting coal in the BITU-MINOUS Coal Field:

District		Fuse	Electric Detonator		Total
Crow's Nest Pass			128,519		128,519
Canmore			61,485		61,485
Brazeau		8,620	431		9,051
Jasper Park		24	27,382		27,406
Yellowhead Pass			56,002		56,002
Mountain Park			29,386		29,386
Total		8,644	303,205		311,849

Estimated number of shots fired in blasting coal in the ANTH-RACITE Coal Field:

District			Electric Detonator		Total
Banff			24,434		24,434

Number of Miss-Fire Shots recorded in blasting coal in the LIGNITE Coal Field:

District	METHOD OF SHOT-FIRING				
	Squibs	Fuse	Electric Detonator	Electric Squib	Total
Pincher Creek	12	3			15
Lethbridge	25	12	13	142	192
Magrath	4				4
Milk River	32	13			45
Taber	10				10
Bow Island					
Medicine Hat	33				33
Aldersyde	17				17
High River		6			6
Drumheller		42	23		65
Big Valley					
Brooks		11			11
Hanna	9	13	1		23
Lacombe					5
Trochu	20	12			32
Three Hills	2	5			7
Carbon					
Battle River					
Camrose					
Tofield	1				1
Clover Bar		11			11
Edmonton		56	4		60
Namoo					
Cardiff		8			8
Wabamun					
Pembina			23	2	25
Peace River					
Total	165	197	64	144	570

Number of Miss-Fire Shots recorded in blasting coal in the BITUMINOUS Coal Field:

District	METHOD OF SHOT-FIRING			
		Fuse	Electric Detonator	Total
Crow's Nest Pass			131	131
Canmore			17	17
Brazeau		56	1	57
Jasper Park			8	8
Yellowhead Pass			88	88
Mountain Park			24	24
Total		56	269	325

Number of Miss-Fire Shots recorded in blasting coal in the ANTHRACITE Coal Field:

District	METHOD OF SHOT-FIRING			
			Electric Detonator	Total
Banff			13	13

The following table shows the quantity of explosives used in pounds for blasting rock in Coal Mines in the Province:

District	NAME OF EXPLOSIVE					Total
	30% Dyna-mite	60% Dyna-mite	Black Powder	Monobel No. 1	Polar Permi-tite	
Crow's Nest Pass		1,428			8,437	9,865
Pincher Creek	150					150
Lethbridge	2,241		120	195		2,556
Magrath			70			70
Milk River	113		75			188
Taber	3,418	674	705	11		4,808
Bow Island	5		86			91
Medicine Hat	1,242	292				1,534
Aldersyde	13		55			68
High River	2	10			8	20
Canmore				290	5,600	5,890
Banff					17,450	17,450
Drumheller	643		70	5,338		6,051
Big Valley						
Brazeau				35	528	563
Brooks	6					6
Hanna	20			20		40
Lacombe	110					110
Trochu	53		170			223
Three Hills			78	10		88
Carbon						
Battle River						
Camrose						
Tofield						
Clover Bar	30					30
Edmonton	46					46
Namoo				78		78
Cardiff						
Wabamun						
Pembina	143					143
Jasper Park	6			232	2,764	3,002
Yellowhead Pass	1,840				1,997	3,837
Mountain Park					329	329
Peace River						
Total	10,081	2,404	1,429	6,209	37,113	57,236

Estimated number of Shots fired for blasting rock in Coal Mines in the Province:

District	Electric Detonator	Electric Squib	Fuse	Squib	Total
Crow's Nest Pass	6,569		549		7,118
Pincher Creek			154		154
Lethbridge	347		1,571	638	2,556
Magrath				133	133
Milk River			340		340
Taber	820		3,541	622	4,983
Bow Island			30	55	85
Medicine Hat			1,243		1,243
Aldersyde			44	60	104
High River			33		33
Canmore	2,350		140		2,490
Banff	12,798				12,798
Drumheller	5,089		3,559		8,648
Big Valley					
Brazeau	1,011				1,011
Brooks			19		19
Hanna			53		53
Lacombe			160		160
Trochu			97	40	137
Three Hills			27	80	107
Carbon					
Battle River					
Camrose					
Tofield					
Clover Bar	35				35
Edmonton			146		146
Namoo			190		190
Cardiff					
Wabamun					
Pembina	90				90
Jasper Park	1,292		1,519		2,811
Yellowhead Pass	1,228		761		1,989
Mountain Park	246				246
Peace River					
Total	31,875		14,176	1,628	47,679

The following table gives the number of Miss-Fire Shots recorded in blasting rock in Coal Mines in the Province:

Districts	Electric Detonator	Electric Squib	Fuse	Squib	Total
Crow's Nest Pass	14				14
Pincher Creek					
Lethbridge	16		2		18
Magrth				2	2
Milk River					
Taber	4		6		10
Bow Island					
Medicine Hat					
Aldersyde					
High River			1		1
Canmore	2		3		5
Banff	2				2
Drumheller	93		8		101
Big Valley					
Brazeau	3				3
Brooks					
Hanna					
Lacombe			4		4
Trochu					
Three Hills			3	2	5
Carbon					
Battle River					
Camrose					
Tofield					
Clover Bar					
Edmonton					
Namoo					
Cardiff					
Wabamun					
Pembina					
Jasper Park					
Yellowhead Pass	13		1		14
Mountain Park					
Peace River					
Total	147		28	4	179

No statistics are available as to the causes of miss-fires.

ELECTRICITY

The Rules for the Installation and Use of Electricity in or about mines require a return to be made to the Department on or before January 21st of each year, giving size, type and any other particulars which may be required of electrical apparatus in use above and below ground. According to the returns received from the different mines, electricity was used at 34 mines in 1917. The Crow's Nest Pass and Drumheller districts were the most active in this respect during the year as will be seen from the following. A summary of these returns regarding the horse-power of electrical apparatus in use is given below:

District	No. of mines using electricity	Horse-power of electrical apparatus in use		Total horse-power
		Above ground	Below ground	
Crow's Nest Pass	6	2,897	400	3,297
Pincher Creek				
Lethbridge	5	786	275	1,061
Magrath				
Milk River				
Taber	2	70	313	383
Bow Island				
Medicine Hat				
Aldersyde				
High River				
Canmore	1	315		315
Banff	1	150		150
Drumheller	6	400	90	490
Big Valley				
Brazeau	1	445		445
Brooks				
Hanna				
Lacombe				
Trochu				
Three Hills				
Carbon				
Battle River				
Camrose				
Tofield				
Clover Bar	2	50	69½	119½
Edmonton				
Namoo				
Cardiff	2		185	185
Wabamun	1	17½		17½
Pembina	1	100	301	401
Jasper Park	2	207		207
Yellowhead Pass	3	115		115
Mountain Park	1	150	65	215
Peace River				
Total	34	5,792½	1,698½	7,401

A closer estimate of the extent to which electricity is used in the different districts may be made by considering the number of tons of coal raised per electrical horse-power employed in all mines under The Mines Act. The following table will give this information:

TONS OF COAL PER ELECTRICAL HORSE-POWER EMPLOYED

District	Tons of coal mined in 1917	Above ground	Below ground	Total above and below ground
Crow's Nest Pass -----	1,193,313	412	2,983	362
Pincher Creek -----	6,804			
Lethbridge -----	619,850	789	2,254	574
Magrath -----	1,011			
Milk River -----	9,140			
Taber -----	175,666	2,509	561	459
Bow Island -----	6,846			
Medicine Hat -----	14,846			
Aldersyde -----	7,339			
High River -----	1,096			
Canmore -----	196,233	623		623
Banff -----	118,717	792		792
Drumheller -----	660,974	1,652	7,344	1,349
Big Valley -----	29,897			
Brazeau -----	266,879	600		600
Brooks -----	8,293			
Hanna -----	26,064			
Lacombe -----	18,223			
Trochu -----	14,134			
Three Hills -----	24,874			
Carbon -----	4,615			
Battle River -----	10,544			
Camrose -----	61,293			
Tofield -----	71,510			
Clover Bar -----	263,857	5,277	380	2,208
Edmonton -----	120,519			
Namoo -----	19,406			
Cardiff -----	257,459	1,392		
Wabamun -----	19,007	186		
Pembina -----	84,349	843	280	210
Jasper Park -----	250,079	1,208		1,208
Yellowhead Pass -----	146,949	1,278		1,278
Mountain Park -----	153,397	1,023	2,360	713
Peace River -----	223			

This table is useful to show by comparison with other years the growth or decline in the use of electricity in the Province as a whole and in each district taken separately.

The number of electrically driven coal-cutting machines in use at the end of the year was fourteen.

No accidents were reported in connection with the use of electricity during the year.

COAL-CUTTING MACHINERY

District	No. of coal-cutting machines operated by		Tons of coal mined by	
	Electricity	Compressed air	Electricity	Compressed air
Crow's Nest Pass				
Pincher Creek				
Lethbridge		89		456,961
Magrath				
Milk River				
Taber	1	38	4,150	150,829
Bow Island				
Medicine Hat		3		9,791
Aldersyde				
High River				
Canmore		2		36,771
Banff				
Drumheller	3	13	32,483	121,188
Big Valley				
Brazeau		3		7,970
Brooks				
Hanna				
Lacombe				
Trochu		2		5,228
Three Hills		1		4,151
Carbon				
Battle River				
Camrose				
Tofield				
Clover Bar	2	5	20,764	54,077
Edmonton		6		87,115
Namao				
Cardiff	4		129,921	
Wabamun				
Pembina	4		80,768	
Jasper Park				
Yellowhead Pass		3		26,316
Mountain Park				
Peace River				
Total	14	165	268,086	960,397

The following tables are taken from reports issued by the Department of Mines, Ottawa. It will be noted, however, that the amount of coal stated in these tables as being produced each year differs slightly from the amount shown by the provincial reports. The particulars for the year 1917 have not yet been received.

ANNUAL PRODUCTION OF COAL IN ALBERTA

Calendar Year	Short Tons	Value	Average per ton
1887	74,152	\$157,577	\$2.13
1888	115,124	183,354	1.59
1889	97,364	179,640	1.85
1890	128,753	198,298	1.54
1891	174,131	437,243	2.51
1892	178,970	460,605	2.57
1893	230,070	586,260	2.55
1894	184,940	473,827	2.56
1895	169,885	382,526	2.25
1896	209,162	581,832	2.78
1897	242,163	630,408	2.60
1898	315,088	788,720	2.50
1899	309,600	774,000	2.50
1900	311,450	778,625	2.50
1901	340,275	850,687	2.50
1902	402,819	960,601	2.38
1903	495,893	1,117,541	2.25
1904	601,732	1,404,524	2.12
1905	931,917	1,993,915	2.14
1906	1,246,360	2,614,762	2.10
1907	1,591,579	3,826,286	2.41
1908	1,685,661	4,127,311	2.45
1909	1,994,741	4,838,109	2.43
1910	2,894,469	7,065,736	2.44
1911	1,511,036	3,979,264	2.63
1912	3,240,577	8,113,525	2.50
1913	4,014,755	10,418,941	2.59
1914	3,683,015	9,350,392	2.54
1915	3,360,818	8,283,079	2.46
1916	4,559,054	11,386,577	2.50

MINERAL PRODUCTION IN ALBERTA, 1915 AND 1916

Product	1915		1916	
	Quantity	Value	Quantity	Value
Gold (ozs.) -----	195	\$ 4,026	82	\$ 1,605
Coal (tons) -----	3,360,818	8,283,079	4,559,054	11,386,577
Natural Gas (M. cu. ft.)	4,481,947	1,022,814	6,904,231	1,113,296
Cement (bbls.) -----	233,648	415,009	275,727	477,832
Clay Products -----		115,696		225,140
Lime (bus.) -----	74,152	14,445	78,019	20,033
Sand-lime Brick (No.)	764,700	6,191	697,500	5,571
Stone -----		890		257
Other Products -----		47,197		67,142
Total Value -----		\$9,909,347		\$13,297,543

ACCIDENTS

Summary table showing Accidents occurring in Mines during 1906 to 1917 inclusive:

Year	Output	Accidents			Tons of Coal Mined Per Accident		
		Fatal	Serious	Slight	Fatal	Serious	Slight
1906	1,385,000	10	11	20	138,500	125,909	69,250
1907	1,834,745	19	18	68	96,565	101,930	26,981
1908	1,845,000	11	38	13	167,727	48,552	141,923
1909	2,174,329	9	42	18	241,952	51,769	120,796
1910	3,036,757	61*	41	58	49,782	71,067	52,375
1911	1,694,564	7	32	45	242,080	52,955	37,656
1912	3,446,349	21	38	58	164,111	90,693	59,419
1913	4,306,346	28	60	83	153,789	71,772	51,883
1914	3,821,739	209**	44	50	18,286	86,857	76,434
1915	3,434,891	18	33	33	190,827	104,087	104,087
1916	4,648,604	20	51	34	232,430	91,149	136,723
1917	4,863,414	24	62	39	202,642	78,442	124,703
Total	36,491,738	437	470	519	83,505	77,685	70,317

*Including thirty-one deaths caused by the Bellevue explosion.

**Including one hundred and eighty-nine deaths caused by the Hillcrest explosion.

Table showing accidents during 1917 classified according to the coal field in which they occurred:

	Output	Accidents			Tons of Coal Mined Per Accident		
		Fatal	Serious	Slight	Fatal	Serious	Slight
Lignite -----	2,537,829	8	41	23	318,229	61,899	110,340
Bituminous ----	2,206,868	16	21	16	137,929	105,089	137,929
Anthracite ---	118,717						

Classification of accidents according to outputs of mines which produced during 1917:

	Under 10,000 tons	From 10,000 to 50,000 tons	From 50,000 to 100,000 tons	From 100,000 to 200,000 tons	From 200,000 to 300,000 tons	From 300,000 to 400,000 tons	Total
Fatal -----		1	11	8	4		24
Serious -----	2	11	17	15	9	8	62
Slight -----	2	6	10	8	7	6	39
Total -----	4	18	38	31	20	14	125

Table showing accidents per ton of coal extracted from mines which produced during 1917:

	Under 10,000 tons	From 10,000 to 50,000 tons	From 50,000 to 100,000 tons	From 100,000 to 200,000 tons	From 200,000 to 300,000 tons	From 300,000 to 400,000 tons
Fatal ----		646,760	101,266	178,096	288,071	
Serious --	98,778	58,887	65,537	94,984	128,032	40,864
Slight ----	98,778	107,977	111,413	178,096	164,612	54,486
Total --	49,389	35,986	29,319	45,963	57,614	23,351

The following tables show the number of tons produced per accident:

LIGNITE COAL MINES

District	Output	No. of Men Employed	No. of Tons Produced per Accident			
			Fatal	Serious	Slight	Total
Pincher Creek	6,804	14				
Lethbridge	619,850	1130	619,850	51,654	68,872	28,175
Magrath	1,011	5				
Milk River	9,140	27				
Taber	175,666	351	175,666	175,666	175,666	58,555
Bow Island	6,846	19				
Medicine Hat	14,846	41			7,423	7,423
Aldersyde	7,339	23				
High River	1,096	6				
Drumheller	660,974	1082	660,974	41,311	94,424	27,541
Big Valley	29,897	38		29,897	29,897	14,948
Brooks	8,283	22				
Hanna	26,064	44				
Lacombe	18,223	42				
Trochu	14,134	32			14,134	14,134
Three Hills	24,874	41		24,874		24,874
Carbon	4,615	12				
Battle River	10,544	23				
Camrose	61,293	104			61,293	61,293
Tofield	71,510	99				
Clover Bar	263,857	288	131,978	263,857		87,952
Edmonton	120,519	187	120,519	120,519		60,259
Namoo	19,406	30				
Cardiff	257,459	238		85,819	128,729	51,491
Wabamun	19,007	41				
Pembina	84,349	104	42,174	28,116		16,870
Peace River	223	2				
Total	2,537,829	4045	318,229	61,899	110,340	35,248

BITUMINOUS COAL MINES

Crow's Nest Pass	1,193,313	1504	170,473	99,443	119,331	41,149
Canmore	196,233	250		196,233	196,233	98,116
Brazeau	266,897	336	266,897		133,448	88,968
Jasper Park	250,079	393	62,520	125,039	250,079	35,726
Yellowhead Pass	146,949	229	73,474	48,983	146,949	24,491
Mountain Park	153,398	219	76,699	51,133	153,398	25,566
Total	2,206,868	2931	137,929	105,089	137,929	41,639

ANTHRACITE COAL MINES

Banff	118,717	250				
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LIST OF ACCIDENTS WHICH HAVE OCCURRED IN THE LIGNITE FIELD DURING 1917.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Jan. 2	Canada West Coal Co., Ltd.	Nick Meheden	24	Pusher	Meheden was pushing a car from a slant to the main entry, when the car becoming derailed knocked out two props, causing about three tons of rock to fall on him, killing him instantaneously.
Jan. 5	Blain and Gilliland	Frank Bilval	39	Miner	Bilval was trimming the rib, when a piece of coal fell on him bruising his back and ankle.
Jan. 11	The Western Commercial Co., Ltd.	S. Petit	27	Blacksmith's helper	Eye injured by pieces of flying steel.
Jan. 16	The Premier Coal Co., Ltd.	L. Bezonello	22	Tracklayer's helper	Was repairing timber on entry when fall of roof occurred. Back broken.
Jan. 16	The Humberstone Coal Co.	I. Flood	29	Box Car loader	Fell while opening door of chute.
Jan. 19	Canada West Coal Co., Ltd.	Nick Serna	23	Scraper	Fracture of fibula close to ankle. Fall of coal while acting as scraper behind coal cutting machine. Fracture of pelvis on left side.
Jan. 29	Canadian Pac. Ry. (No. 3 Mine, Lethbridge)	Robert Naysmith	66	Timber Boss	Crushed by cage while crossing shaft bottom when cage was in motion. One broken rib and bruised about hips and chest.
Feb. 1	North American Collieries, Ltd., Evansburg	Carl Mierling	48	Motor charger	Mierling was intending to step on the cage for the purpose of going under ground, but evidently stepped into the wrong compartment of the shaft and fell to the shaft bottom.
Feb. 3	Redcliff Brick and Coal Co., Ltd.	John Morgan	30	Miner	While carrying cartridges loaded with black powder, Morgan allowed his lamp to fall, igniting the powder. Face and hands burned.

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Feb. 10	Western Commercial Co., Ltd.	Harry Minchuk	33	Miner	Minchuk was erecting a timber which had been broken down as the result of a shot when a portion of the roof fell on him. Leg fractured above knee.
Feb. 12	Rosedale Coal and Clay Products, Co., Ltd.	Charles Chering	39	Miner	Chering was employed as a miner when a portion of the roof fell on him, causing a scalp wound and bruising his arm.
Mar. 8	Great West Coal Co. Ltd.	John Gordon	19	Miner	After lighting his shot and retiring, he thought his shot had gone off and returned to see effect of same. The shot he had heard was one fired at entry face and his shot exploded when he was within six feet of face, the coal burying him. Concussion of the brain. Fatal.
Mar. 11	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	Alexander Muir	43	Shaft Inspector	Muir had instructions to notify the hoisting engineer before starting work. One cage was standing at the surface landing and Muir started to examine the cage landings before calling up the engineer by phone, and the cage came down and caught him. The boss driver stopped the cage before the full weight came on him. Badly squeezed and back injured.

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Mar. 16	North American Collieries, Ltd., Coalhurst.	John McInnis	26	Driver	He stopped a trip of cars, took out the sprags and was making a run to get up the grade in front of him; the cars jolted and he fell off his seat. He caught hold of the tail chain attached to car and was dragged about sixty feet in front of a five car trip. Broken left femur and scalp wound on back of head.
Mar. 19	Chinook Coal Co., Ltd.	Joe Prontrolla	35	Machine runner	Commenced work at 4 p.m. and had evidently just got to his place when gas was ignited. As the place was inspected at 4 o'clock, it would seem that a smaller feeder had opened up during the half hour interval of changing shift.
Mar. 20	Western Commercial Co., Ltd.	Peter Mush	34	Miner	Going to work and walking on a rail he slipped and fell; powder can lid opened and open lamp fell among the powder. Back of right hand and face slightly burned.
Mar. 27	North American Collieries, Ltd., Coalhurst.	Nick Vootsas	28	Loader	Was loading cars in a cross cut when piece of draw-slate about four inches in thickness fell and struck him on back. Fractured spine.
April 2	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	W. Chobitar	27	Gripper	Was attempting to cross over a crossing with trip of empty cars without a signal from the trapper and ran into a loaded trip that was passing. Small bone fractured in left leg.

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
April 7	North American Collieries, Ltd., Evansburg	Saigi Yagi	32	Miner	Yagi was taking down coal that had been loosened with his shot when a piece rolled down off the face and hit him on the knee and foot. Three small bones fractured in right foot. Attempting to put bolts in flanges of a haulage wheel without stopping it, when the sleeve of his coat was caught by a bolt, pulling his arm between the wheel and the floor. Badly lacerated and fractured right arm, necessitating amputation near shoulder.
April-18	Canadian Pac. Rly. (No. 3 Mine, Lethbridge)	John Cumuk	45	Rollerman	Slipped while opening coal chute door on tippie. Left leg fractured.
May 23	Rosedale Coal and Clay Products Co., Ltd.	John Rist	32	Labourer	The injured man was working in a stooping position at the face of a room when a piece of rock fell from between two props striking him on the back. Fracture of spine.
May 28	The Ellis Coal Co., Ltd.	B. Burtocoo	27	Miner	Struck by corner of derailed car. Leg fractured.
June 15	John W. Riley	John W. Riley	26	Miner	Simione had fired a shot in the bottom coal and was loading same when a piece of cap rock fell, causing compound fracture of right leg.
June 18	Rose Deer Coal Mining Co., Ltd.	A. Simione	21	Miner	Fall of coal while under cutting. Back injured.
June 23	Calgary Collieries, Ltd.	Mike Iwaniuk	24	Machine runner	Fall of rock. Both legs fractured.
June 25	Star Coal Mines, Ltd.	Adolph Dechance	32	Miner	Foot slipped between buffers of mine car. Foot bruised.
June 26	Star Coal Mines, Ltd.	John Zambaldi	23	Driver	

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
July 4	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	John Kejwan	22	Driver	While passing along 10 Butt with a loaded trip, his horse balked and he fell off the grip and the cars ran into him. Dislocated hip.
July 12	Western Commercial Co., Ltd.	Sam Ostak	30	Fireman	Slipped into hot well in boiler house.
July 14	Drumheller Land Co., Ltd.	Ben Lewis	32	Miner	Right leg scalded below knee. He was pushing out a car from face when timbers which were two feet from face swung out, allowing roof to come down, which caught injured men. Scalp wound.
July 14	Drumheller Land Co., Ltd.	J. Vinci	30	Miner	See above accident. Fractured ankle.
July 24	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	Mike Mellis	34	Driver	Was coming out of 9 Butt 6 Face with two loads and was sitting on the first car when his back caught a low timber which pushed him backwards on the car. Severe bruises of the back.
Aug. 1	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	F. Raycesany	43	Loader	While helping a driver to replace a trip of derailed cars, the horse pulled ahead and caught him against a prop. Broken collar bone.
Aug. 1	Canadian West Coal Co., Ltd.	J. H. Williams	23	Loader	Was making up a shot (black powder) and knocked over his powder can. In stooping to pick it up his lamp fell off his head and ignited the spilled powder and the powder in the can. Burns on face and hands.
Aug. 9	Rosedale Coal and Clay Products Co., Ltd.	A. Roberge	29	Miner	Struck by falling coal. Fracture of fibula bone.

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Aug. 14	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	Thomas Scott	11	Not employed	Was with his mother picking coal on the rock dump near track and attempted to board trip of cars before they came to a stop, but falling in front was pushed along about eight feet. Had been warned two days previous. Bad cut on both legs. Was driving through a fault and evidently struck feeder of gas. Burned about face and arm.
Aug. 16	Chinook Coal Co., Ltd.	John Zagara	42	Machine man	Was loading car in No. 32 room when a piece of coal fell from rib and crushed him against car he was loading. Bruises on back and side. While working at the face of room, was injured by fall of rock. Fracture of both bones of right ankle. Crushed between cars. Foot and leg slightly bruised.
Aug. 20	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	John Rohivie	35	Coal loader	Horse started while Martin was getting on car seat, his foot slipped and he fell under the car. Two ribs broken.
Aug. 21	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	Matt Mudrak	25	Coal loader	
Aug. 21	Western Commercial Co., Ltd.	Harry Shopshi	36	Driver	
Sept. 5	North American Collieries, Ltd., Drumheller	Jen Martin	35	Driver	

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Sept. 6	Canadian Pac. Rly. (No. 3 Mine, Lethbridge)	Mike Pitoski	30	Coal loader	Was returning from his working place to pit bottom, along Lucas rope road, when driver was passing out of No. 23 Butt with a truck loaded with long rails. Pitoski apparently did not notice the length of the rails extending behind the truck; these caught him on the left leg, fracturing it below the knee.
Sept. 10	Drumheller Land Co., Ltd.	M. Millick	32	Driver	He was cutting off his mule from loaded cars and, stepping off the car, got crushed between cars and timber on siding. Complicated fracture of ribs on right side; two broken.
Sept. 15	Federal Coals, Ltd.	William Drinkall	39	Teamster	A car had been dumped into the chute and was being pulled out by a horse, when car caught against a beam placed across the top of chute. Drinkall went to lift the car over the beam when it bounded forward and caught him against the timbers, breaking his right ankle. Compound fracture.
Sept. 20	Alberta Coal Mining Co., Ltd.	Mike Stroyck	19	Driver	He was bringing a trip of cars from main south and collided with the rear end of trip coming from fifth east. This was through flagman giving him the wrong signal, resulting in his left leg being broken.

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Sept. 29	Midland Collieries, Ltd.	B. Roszko	34	Miner	He was timbering his place when a fall of rock caught him on the leg, breaking it at the ankle (left).
Oct. 1	Drumheller Land Co., Ltd.	L. Romano	30	Miner	He was lifting an empty car on the track and slipped, his right hand being caught between car bumper and rail, breaking first finger and crushing second.
Oct. 2	Sterling Coal Co., Ltd.	Joe Kosky	16	Slate picker	He was away from his duties, reason not known, and was hurt by conveyor from tippie. Right hand severely crushed, necessitating amputation.
Oct. 11	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	W. H. Crombie	32	Teamster	While roping a horse, he was kicked by the animal on the right arm, breaking it.
Oct. 13	Redcliff Brick and Coal Co., Ltd.	Alfred Womersley	35	Miner	He was brushing the main entry when a piece of rock fell on his back, bruising same.
Oct. 13	Big Valley Collieries, Ltd.	Harry Martin	39	Miner	Fall of coal from roof at face of room bruised back.
Oct. 18	Western Gem Mining Co., Ltd.	J. Minshuk	28	Miner	Car ran over end of track, at face of entry, onto his foot. Bone in lower part of leg broken.
Oct. 27	Western Commercial Co., Ltd.	P. Kreckovich	34	Miner	Fall of cap rock, in head counter entry. Head cut and back bruised

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Oct. 30	Dawson Coal Co., Ltd.	A. VanCovberg	34	Miner	He was shovelling coal into car at face of No. 9 room, 2nd East entry, when piece of rock fell from the roof, between last timber and face of room, onto his side and leg, fracturing his thigh.
Oct. 31	Twin City Coal Co., Ltd.	Otto Engle	38	Miner	He was working at the face of No. 2 room, 3rd West entry off 5th North, when a piece of rock fell from the roof, swinging out the last set of timbers, falling across his head and back, crushing and fracturing his spine. Fatal.
Oct. 31	Chinook Coal Co., Ltd.	W. Nikol	29	Driver	He was hauling a puncher machine on a truck from No. 6 Butt entry to No. 7 Butt, and evidently his foot was caught on a tie, causing his right leg to be pulled under the truck, with the result that his leg was fractured.
Nov. 1	Big Valley Collieries, Ltd.	Steve Zerbycky	30	Miner	Was taking a car of rock to dump, stepped in front to unhook horse, when he was crushed between the car and a post on the rock dump, resulting in compound fracture of ribs and lacerated side.
Nov. 6	Humberstone Coal Co.	Louis Stepnovich	44	Miner	Was undercutting a pillar when coal rolled over on him, breaking his back, death resulting from his injuries on Nov. 15th, 1917. Fatal.

DEPARTMENT OF PUBLIC WORKS

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Nov. 7	Star Coal Mines, Ltd.	Bill Olinik	38	Miner	Fall of rock from roof of entry. Head and back crushed. Fatal.
Nov. 17	Western Commercial Co., Ltd.	G. Altredo	32	Miner	Was tamping a shot when the shot exploded and he was cut and bruised on body and face, and eyes injured.
Nov. 17	Federal Coals, Ltd.	Steve Popson	25	Shiftman	Was breaking in a horse to pull up the slope when the horse turned quickly, crushing Popson's hand, breaking a bone in the thumb.
Nov. 21	North American Collieries, Ltd., Evansburg	Bill Mucha	31	Surface labourer	Was putting black powder in a shot hole which he had previously sprung with stumping powder, when the powder exploded, burning him about the face and hands.
Nov. 21	North American Collieries, Ltd., Evansburg	N. S. Battee	25	Loader	While barring down loose coal, same dropped on him before he could get clear. Broken collar bone.
Nov. 23	North American Collieries, Ltd., Evansburg	Edward Sullivan	42	Carpenter	He was with another carpenter putting in guides in the north side shaft, and was going to the surface on south cage; in some way he fell off the cage to the bottom of the shaft. The top of his skull was taken off. Fatal.
Dec. 4	Cardiff Collieries, Ltd.	E. I. Roberts	31	Manager	Was hit by a runaway empty car at foot of slope; car had broken loose from couplings. Bruised back above left hip.

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Dec.	4 Chinook Coal Co., Ltd.	Griffith Thomas	36	Car handler	Engine was making a flying switch and had cut loose from three empty cars, and gotten off the track at the switch; the cars ran into the tender, deceased was on top of empty cars and was thrown under the wheels when cars struck the tender. Both legs and pelvis badly crushed. He died from injuries about two hours after receiving same.
Dec.	5 Cardiff Collieries, Ltd.	Alex. Stepovich	27	Cager	Chain coupling broke on empty side of slope, allowing empty car to run away, striking Stepovich. Partial dislocation of right shoulder, injuring upper portion of right lung with hemorrhage.
Dec.	5 Alberta Block Coal Co., Ltd.	Tony Violini	40	Box Car Shoveler	While a car of slack was being moved from under tippie he got his head caught between chute and car door. Bruised and cut on head.

DEPARTMENT OF PUBLIC WORKS

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Dec. 7	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	Mike Burdeine	18	Helper	He had three cars to be coupled to trip which gripper was bringing from 5th S.W. Face entry; the trip struck the three cars and started them down grade. Burdeine opened the derailling switch and put them off the track. While they were being pulled on the track he slipped between. From the indications it would appear that one car passed over his left arm, which was broken and severely injured.
Dec. 7	Canadian Pac. Rly. (No. 6 Mine, Lethbridge)	George Hargreaves	41	Examiner	Had fired a shot in a crosscut which blew through and he was struck on the head by a piece of coal. Head cut.
Dec. 10	North American Collieries, Ltd., Evansburg	F. B. Chambers	57	Labourer	He was riding out on the motor, after being told by the motorman that he was not allowed to ride. A car of timber had been left on the track, and seeing it Chambers got frightened and jumped off, fell and was struck by the motor before it could be stopped, resulting in his right leg being fractured.
Dec. 31	Cardiff Collieries, Ltd.	Mike Mardal	23	Cager on tipple	In closing door of empty car got his finger caught. Badly crushed finger on right hand.

LIST OF ACCIDENTS WHICH HAVE OCCURRED IN THE BITUMINOUS FIELD DURING 1917.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Jan. 10	Jasper Park Collieries, Ltd.	Joseph Gibson	42	Miner	Was driving crosscut through angle which was blocked with coal, cutting off the ventilation, when he was asphyxiated with gas which had accumulated at the face. Fatal.
Jan. 12	Brazeau Collieries, Ltd.	Kost Kryson	28	Miner	Kryson was undercutting a bench when part of the coal fell and crushed him against a timber. Fatal.
Jan.	West Canadian Collieries, Ltd., Bellevue	J. Connor	32	Miner	Fall of rock in chute. Right leg fractured in three places above knee.
Jan. 29	Franco-Canadian Collieries, Ltd.	Karl Pohorny	29	Motorman	Asphyxiated by fumes from gasoline locomotive while running locomotive in a closed shed. Fatal.
Feb. 15	West Canadian Collieries, Ltd., Bellevue	James Burrows	45	Miner	Fall of coal in pillar. Severely crushed about pelvis and left leg.
Feb. 19	West Canadian Collieries, Ltd., Greenhill	William Archer	56	Incline roller attendant	Deceased was working on the incline when the trip was in motion, apparently in contravention of instructions which had been given him by the master mechanic, when he was caught by the trip. Fatal.
Feb. 20	West Canadian Collieries, Ltd., Bellevue	Andrew Goodwin	30	Miner	Fall of coal in pillar. Head injured.
Feb. 26	West Canadian Collieries, Ltd., Bellevue	D. Magdoli	20	Bucker	While between motor and cars motorman started motor, crushing Magdoli's legs.
Feb. 27	West Canadian Collieries, Ltd., Bellevue	A. Leskuski	39	Miner	Fall of cap rock in pillar. Left arm fractured and shoulder dislocated.
Feb.	International Coal and Coke Co., Ltd.	Mike Grisock	17	Chute loader	Caught between car and prop. Right arm fractured below elbow and flesh wound of right hand.

DEPARTMENT OF PUBLIC WORKS

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Feb. 27	Canmore Coal Co., Ltd.	Joe Arychuk	17	Switchman	Crushed between timber and motor while attempting to get on motor. Injury to abdomen.
Mar. 7	Hillcrest Collieries, Ltd.	Samuel Jennings	48	Miner	Was loosening piece of bench rock in room which fell against his leg, causing him to lose his balance and crushing him against another piece of rock. Compound fracture of left arm.
Mar. 8	North American Collieries, Ltd., Lovett	George Maksymec	48	Miner	Fall of coal from roof. Skull crushed. Fatal.
Mar. 25	Mountain Park Coal Co., Ltd.	Fred Dolinsky	35	Miner	Dolinsky was re-timbering bottom of room and was getting ready to place new timber when the old timber gave way and he was buried underneath a quantity of coal. Fatal.
Mar. 12	McGillivray Creek Coal and Coke Co., Ltd.	Wajsich Konopaski	35	Miner	Was in the act of taking out a sprag from under the top coal in a room when the coal fell on his back. Back severely bruised.
Mar. 14	West Canadian Collieries, Ltd., Bellevue	F. Bertram	33	Bucker Boss	He was standing at the mouth of a chute loading a car when a piece of coal knocked him down onto the car below. Bruises.
Mar. 16	Mountain Park Coal Co., Ltd.	B. Mucha	32	Driver	Crushed between car and rib. Crushed about chest.
Mar. 23	West Canadian Collieries, Ltd., Greenhill	W. Claes	30	Miner	Right leg fractured. Fall of top coal.

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Mar. 28	International Coal and Coke Co., Ltd.	James Darzic	38	Boiler fireman	Was going to put hose in the top man-hole of No. 9 Boiler; pushed plate in, water splashed and struck him on back. Back and hips scalded.
April 2	Mountain Park Coal Co., Ltd.	F. Valentine	30	Miner	Died April 18, 1917. Fatal
April 11	Yellowhead Coal Co.	Donald McKay	40	Overman	Was putting up timber when a piece of cap rock fell, striking him on the hips and back, and in jumping away he injured himself internally. Injured hips and bladder.
April 16	Olipphant-Munson Collieries, Ltd.	Angelo Beteol	24	Miner	Fall of coal in angle chute. Death instantaneous.
May 8	Jasper Park Collieries, Ltd.	John A. Livingstone	37	Miner	Premature ignition of shot. Right arm bruised and head cut.
May 21	Yellowhead Coal Co.	P. Loguscz	27	Miner	Overcome by gas at face of crosscut. Lamp found 12 feet back from face. Asphyxiated.
June 5	Saunders Creek Coal Co., Ltd.	Max Bertueck	30	Miner	Was coupling cars, and while separating them with his leg another car bumped into them, jamming his leg and breaking it.
June 6	Saunders Creek Coal Co., Ltd.	Lawrence Bellecoeto	28	Machine runner	Was cleaning top of coal after mining was finished when a piece of rock fell on his finger. End of finger smashed.
					Was taking down machine when a piece of rock fell and struck him on the forehead.

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
July 5	West Canadian Collieries, Ltd., Bellevue	J. Kiouisi	39	Miner	While his partner was hanging a sheet iron under a drip, it slipped and caught injured man on the head. Cut above right ear.
July 7	West Canadian Collieries, Ltd., Bellevue	E. Easton	53	Bratticeman	While placing prop he caught his hand. Right hand flesh wound.
July 14	International Coal and Coke Co., Ltd.	Steve Kapelka	52	Miner	Piece of coal fell from bench and struck him. Left arm and side bruised.
July 19	McGillivray Creek Coal and Coke Co., Ltd.	George Grafton	19	Motorman	He was pushing a loaded trip of cars out of the entry when a bolt holding the side of the car became detached, allowing the side of the car to spring open, which came in contact with a set of timber, knocking it out. Third and fourth fingers severed and second finger crushed on right hand.
July 30	International Coal and Coke Co., Ltd.	Joe Blahut	47	Timberman	Was taking out old collars when timber fell and struck him while he was holding pinch bar. Base of right thumb cut.
July 30	International Coal and Coke Co., Ltd.	Louis Petlock	46	Miner	Piece of rock fell and struck him. Left foot badly crushed.

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
July 30	West Canadian Collieries, Ltd., Greenhill.	Sam Mason	33	Examiner	Injured man was cleaning the battery of an Edison Electric Lamp in the office with a piece of wire which was the end of a tangle of cap wire. A detonator was concealed in the tangle of wire and exploded while in the hand of the injured man. Right hand lacerated and slight cut on the abdomen.
Aug. 8	Hillcrest Collieries, Ltd.	Julien Lefort	42	Miner	Cap rock fell on his arm. Dislocated arm.
Aug. 28	Yellowhead Coal Co.	N. Blazenhko	22	Driver	Injured man was riding on front end of trip when he was crushed between the side of the car and the frame of a door. Bruises and wounds on right hip and injured groin and back.
Sept. 19	Mountain Park Coal Co., Ltd.	S. Bobaski	29	Miner	Top rock and timbers fell on him, throwing him on his pick handle, which penetrated his abdomen, causing injuries from which he died on Sept. 21, 1917. Fatal.
Sept. 20	Mountain Park Coal Co., Ltd.	Alex Stephen	38	Driver	Crushed between door frame and mine car. Collar bone broken.
Sept. 22	McGillivray Creek Coal and Coke Co., Ltd.	John Mazur	21	Driver	He was coming out with a trip of loaded cars; the trapper boy neglected to open the door, with the result that the horse crashed into the door, crushing deceased between the horse and cars, causing internal injuries from which he died on Sept. 25, 1917. Fatal.

DEPARTMENT OF PUBLIC WORKS

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Sept. 25	West Canadian Collieries, Ltd., Bellevue.	W. J. Davidson	38	Miner	Was undermining when coal fell on him, crushing and suffocating him. Fatal.
Sept. 25	Hillcrest Collieries, Ltd.	Paul Royko	40	Miner	Was mining in pillar with his partner; top coal and cap rock fell on him, fracturing a rib, lacerated forehead and sprained ankle (left side).
Sept. 29	Hillcrest Collieries, Ltd.	Carlo Bossetti	26	Miner	Timber fell out at face bringing rock with it onto his leg, breaking the leg.
Oct. 3	Franco-Canadian Collieries, Ltd.	Archie McDonald	29	Miner	A piece of coal fell and struck him on the left leg, breaking it below the knee. He died from injuries on Sept. 7, 1917.
Oct. 6	West Canadian Collieries, Ltd., Bellevue	William Thysen	40	Miner	Fall of roof rock in room. Fatal.
Oct. 20	Yellowhead Coal Co.	Mike Hiesko	24	Miner	He had been sent to take a large rock out of a chute, and in loosening the rock it caught one end of the bar, which was across the chute door, causing the other end to strike him between the legs. Injury to urethra, causing hemorrhage from bladder.
Oct. 27	Blue Diamond Coal Co., Ltd.	L. Larsen	34	Rock miner	Was trimming down loose rock off the side of new rock tunnel when a piece dropped on his leg, causing compound fracture of left leg.
Nov. 6	Jasper Park Collieries, Ltd.	John A. Macaulay	34	Miner	Was found dead at face of crosscut off 111 angle. Verdict at inquest given that death was caused by gas poisoning.
Nov. 10	Hillcrest Collieries, Ltd.	Jakob Melnik	25	Driver	Caught between chute and car.

LIST OF ACCIDENTS, ETC.—Continued.

DATE	MINE	NAME	AGE	OCCUPATION	DETAILS
Nov. 19	Blue Diamond Coal Co., Ltd.	R. Brown	24	Outside laborer	He was unloading a R.R. car of gravel when empty cars bumped the car he was working in, throwing him over the end onto the truck and his foot was caught under a wheel, crushing his foot.
Nov. 27	Jasper Park Collieries, Ltd.	John B. McLeod	47	Miner	Overcome by gas at face of angle. His lamp was found seven feet back from face of angle in the intake air; asphyxiated. Fatal.
Nov. 28	West Canadian Collieries, Ltd., Bellevue	R. Rosio	28	Miner	Fall of coal in room. Broken leg.
Dec. 19	Mountain Park Coal Co., Ltd.	Tony Bryan	35	Miner	He was putting up timber at the bottom of slope when two loaded cars ran away, running through the derail switch, displacing timber which caught him. Bruises to body and legs.
Dec. 19	Canmore Coal Co., Ltd.	Pete Panchuk	21	Miner's helper	He was working at face of No. 11 slope Stewart Seam, when loaded cars which had been hoisted up slope ran back, striking the face and scattering the coal which struck him on head and face, cutting same. The cars ran back through neglect on part of rope-rider to change the switch at top of dip.
Dec. 22	Blue Diamond Coal Co., Ltd.	Tom Kosokovich	29	Driver	Was driving a horse when his light went out. He jumped off the car and fell between the side and car. Side and legs crushed.

FATAL ACCIDENTS.

The fatal accident which occurred to Nick Meheden on January 2nd, 1917, at mine operated by the Canada West Coal Co., Ltd., of Taber, was caused through a fall of rock. He was pushing a car from a slant to main entry, when the car becoming derailed knocked out two props causing about three tons of rock to fall on him, killing him instantly.

The fatal accident which occurred to Joseph Gibson on January 10th, 1917, in mine operated by the Jasper Park Collieries, Ltd., at Pocahontas, was caused by asphyxiation by gas. He was driving a crosscut through to an angle, that had been blocked with coal, cutting off the ventilation, and breaking through was caught by the gas which had accumulated.

The fatal accident which occurred to Kost Kryson on January 12th, 1917, in mine operated by the Brazeau Collieries, Ltd., at Nordegg, was caused by a fall of coal at face of room. He was under-mining the bench coal when it fell over on him, crushing him against a timber.

The fatal accident which occurred to Karl Pohorny on January 29th, 1917, at mine operated by the Franco-Canadian Collieries, Ltd., at Frank, was caused by asphyxiation by exhaust gases from a gasoline locomotive. He had been repairing the locomotive in the shed, which was closed, and had been running the engine trying it out, when the exhaust gases asphyxiated him.

The fatal accident which occurred to Carl Mierling on February 1st, 1917, in mine operated by the North American Collieries, Ltd., at Evansburg, was caused through his falling down the shaft from the surface. He had been underground and been hoisted to the surface for some hot water, coming up on the north cage and intended going back with the same cage, by some means stepped into the south side and fell to the shaft bottom and was killed.

The fatal accident which occurred to William Archer on February 19th, 1917, at mine operated by the West Canadian Collieries, Ltd., near Blairmore, was caused through his being struck by a trip of loaded cars on the surface incline. He was working on the incline while the trip was in motion, when he was struck, receiving fatal injuries. He had been instructed not to work on tracks while the trip was in motion.

The fatal accident which occurred to John Gordon, on March 8th, in mine operated by the Great West Coal Co., Ltd., Clover Bar, was caused through his going back onto a shot before it had exploded. After lighting his shot and retiring he heard a shot explode and thinking it was his went back. When it exploded he was within six feet of the face, the coal burying him and striking him on the head, causing concussion of the brain, from the effects of which he died a few hours later.

The fatal accident which occurred to George Maksymec on March 8th, 1917, in mine operated by the North American Collieries, Ltd., at Lovett, was caused by a fall of coal in a pillar. He was loading coal when a large piece of coal fell off the rib striking him on the head, killing him instantly.

The fatal accident which occurred to Fred Dolinsky, on March 10th, 1917, in mine operated by the Mountain Park Coal Co., Ltd., at Mountain Park, was caused by a cave. He was re-timbering an old room, which was to be used as an underground stable, and was getting ready to place new timber when the old timber gave way, taking out some of the timber that had been reset, burying him, killing him instantly.

The fatal accident which occurred to James Dargie on March 28th, 1917, at mine operated by the International Coal and Coke Co., Ltd., Coleman, was caused through his being scalded on back and hips. The No. 9 boiler had been cut off the line for washing purposes and he had filled it up twice with water to cool it off. He was taking the manhole cover off and allowed the cover to drop inside the boiler, when the hot water splashed up onto his back and hips, scalding him, from the effects of which he died on April 18th, 1917.

The fatal accident which occurred to Donald McKay on April 11th, 1917, in mine operated by the Yellowhead Coal Co., near Coalspur, was caused by a fall of coal. An angle chute had been driven through from main to counter entry and he had gone up with the miners to inspect the roof. After inspection and pronouncing it safe he sat down, when the coal fell on him, fracturing his skull, causing death.

The fatal accident which occurred to John A. Livingstone on May 8th, 1917, in mine operated by the Jasper Park Collieries, Ltd., at Pocahontas, was caused by his being overcome by gas, at face of a crosscut. His lamp was found 12 feet back from the face in the intake air.

The fatal accident which occurred to Steve Boboski, on September 19th, 1917, in mine operated by the Mountain Park Coal Co., Ltd., at Mountain Park, was caused by a fall of roof rock at the face of a room. He had fired shots in the bottom coal and was digging with a pick when a large piece of rock slipped from the roof, knocking out two sets and throwing him on to his pick handle, which penetrated his groin, causing internal injuries, from which he died on September 21st, 1917.

The fatal accident which occurred to John Mazur, on September 22nd, 1917, in mine operated by the McGillivray Coal and Coke Co., Ltd., near Coleman, was caused by his being crushed between a trap door and trip of loaded cars. He was taking a trip of loaded cars along the main entry when trapper boy neglected to open the door, with the result that the horse crashed into the door, crushing Mazur between the horse and cars, causing internal injuries from which he died on March 25th, 1917.

The fatal accident which occurred to W. J. Davidson, on September 25th, 1917, in mine operated by the West Canadian Collieries, Ltd., Bellevue, was caused through a fall of coal, which he was undermining at the time; this crushed and suffocated him. He had neglected to sprag the coal.

The fatal accident which occurred to Archie McDonald on October 3rd, in mine operated by the Franco-Canadian Collieries, Ltd., at Frank, was caused by a fall of coal from the face of an angle,

which struck him on the left leg, breaking it below the knee. He died from the effects of his injuries on October 7th, 1917.

The fatal accident which occurred to William Thysen on October 6th, in mine operated by the West Canadian Collieries, Ltd., Bellevue, was caused through a fall of roof rock at the face of a room. He had been instructed by the examiner, as he was going on shift, to timber this place, but had neglected doing so.

The fatal accident which occurred to Otto Engle on October 31st, 1917, in mine operated by the Twin City Coal Co., Ltd., of Edmonton South, was caused by a fall of rock at the face of a room. He had fired three shots and had put up a post at the face and was loading the coal when a piece of rock dropped from the roof, swinging out the last set, and falling on him, crushing and fracturing his spine, killing him instantly.

The fatal accident which occurred to Louis Septnovich on November 6th, 1917, in mine operated by the Humberstone Coal Co., near Beverly, was caused through a fall of coal, from the face of a pillar which he was in the act of undermining, breaking his back and injuring him internally, from the effects of which he died on November 15th, 1917.

The fatal accident which occurred to John A. Macaulay, on November 6th, 1917, in mine operated by the Jasper Park Collieries, Ltd., at Pocahontas, was caused by asphyxiation. He was found dead in his place at the end of the brattice, the place being clear at the time he was found. It was assumed he died from gas poisoning.

The fatal accident which occurred to Bill Olinik on November 7th, in mine operated by the Star Coal Mine, Ltd., at Aerial, was caused by a fall of rock from the roof at face of entry.

The fatal accident which occurred to Edward Sullivan on November 23rd, 1917, in mine operated by the North American Collieries, Ltd., at Evansburg, was caused through his falling off the cage while being hoisted up the shaft. He was working with another carpenter repairing guides at the shaft bottom, and was going up to the surface for material when in some way he fell off the cage to the shaft bottom and was killed, the top of skull being taken off.

The fatal accident which occurred to John B. McLeod, on November 27th, 1917, in mine operated by the Jasper Park Collieries, Ltd., at Pocahontas, was caused by asphyxiation. He was driving an angle, and had slabbbed his place ready to leave for the night, when an outburst of gas caught him at the end of the brattice, which was 7 feet back from the face; his lamp was hanging at the end of the brattice on the intake side.

The fatal accident which occurred to Griffith Thomas, on December 4th, 1917, at mine operated by the Chinook Coal Co., Ltd., of Commerce, was caused by his falling off the top of a box car and being run over by the car. He was engaged switching R. R. cars and was attempting to make a flying switch; the locomotive had been cut off and run ahead and the tender got off the track, with the result that the car the deceased was on struck the tender and rebounded, throwing him on to the track and before he could be removed the cars ran back over him crushing both legs and pelvis, from the results of which he died within two hours after the accident.

TABLE SHOWING ACCIDENTS AS THEY OCCURRED BY MONTHS DURING THE YEAR 1917.

Months	Above Ground				Below Ground				Total above and below ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
January	1	2		3	3	4	1	8	11
February	1			1	1	6	3	10	11
March	1			1	3	7	3	13	14
April					1	4	1	6	6
May		1		1	1	2		3	4
June		1		1		2	4	6	7
July			2	2		3	7	10	12
August			1	1		4	5	9	10
September		1		1	3	8		11	12
October		2		2	3	5	4	12	14
November		3		3	5	3	1	9	13
December	1		2	3		4	4	8	11
	4	10	6	20	20	52	33	105	125

Tabulated list of Accidents occurring in the Province above and below ground during the year 1917:

Cause	Fatal		Serious		Slight		Total	
	A	B	A	B	A	B	A	B
Haulage	1	2	1	21	1	11	3	34
Shaft accidents		2		2				4
Fall of coal		7		10		6		23
Fall of rock		4		17		6		27
Struck by flying coal, run-away cars						1		1
Shot-firing, struck by coal		1		1		2		4
Shot-firing, premature ignition of black powder			1			2	1	2
Ignition of gas						2		2
Asphyxiated by gas		4						4
Gasoline Loco. Asphyxiated by fumes	1						1	
Timbering						1		1
Tipple, screening plant			2				2	
Premature explosion of detonator					1		1	
Scalded by hot water from boiler manhole	1						1	
Railroad cars	1		1		1		3	
Miscellaneous			5	1	3	2	8	3
	4	20	10	52	6	33	20	105

Tabulated List of Accidents occurring in the Province above and below ground during the year 1917, classified according to the Districts in which they occurred.

Name of District	Fatal		Serious		Slight		Total		Total above and below ground
	Above	Below	Above	Below	Above	Below	Above	Below	
Crow's Nest Pass	3	4		12	1	9	4	25	29
Pincher Creek			1				1		1
Lethbridge	1		2	10	2	7	5	17	22
Magrath									
Milk River									
Taber		1		1		1		3	3
Bow Island									
Medicine Hat						2		2	2
Aldersyde									
High River									
Canmore				1		1		2	2
Banff									
Drumheller		1	3	13	2	5	5	19	24
Big Valley			1			1	1	1	2
Brazeau		1				2		3	3
Brooks									
Hanna									
Lacombe									
Trochu						1		1	1
Three Hills				1				1	1
Carbon									
Battle River			1				1		1
Camrose									
Tonfald									
Clover Bar		2	1				1	2	3
Edmonton		1		1				2	2
Namoo									
Cardiff				3	1	1	1	4	5
Wabamun									
Pembina		2		3				5	5
Jasper Park		4	1	1		1	1	6	7
Yellowhead Pass				3		1		6	6
Mountain Park		2				1		6	6
Peace River		2		3					
	4	20	10	52	5	33	20	105	125

The following tables give the classification of accidents according to the Coal Field in which they occurred:

LIGNITE.

CAUSE	ABOVE GROUND			BELOW GROUND		
	Fatal	Serious	Slight	Fatal	Serious	Slight
Rope haulage, arm caught in bull wheel					1	
Rope haulage, fell in front of trip			1		1	
Rope haulage on slope, struck by runaway cars					2	
Horse haulage, fell in front of trip					2	1
Horse haulage, caught between car and prop					1	2
Horse haulage, struck by truck of rails					1	
Horse haulage, caught between cars					2	2
Horse haulage, foot caught under car					1	
Storage battery electric haulage, fell in front of motor					1	
Hand haulage, fall of roof in room displaced timber					2	
Hand haulage, car jumped track, knocking out timber				1	1	
Shaft accident, caught by cage					1	
Shaft accident					1	
Shaft accident, fell down shaft from surface				1		
Fell off cage while in motion				1		
Fall of coal off rib in room					1	2
Fall of coal at face of entry					1	
Fall of coal at face of room					1	2
Fall of coal in pillar				1		
Fall of rock from roof at face of room				1	8	1
Fall of rock at face of entry				1		2
Fall of rock on entry while timbering				1	1	
Struck on head by piece of coal from shot						1
Shot-firing, went back too soon on shot				1		
Compressed air coal cutting machine					2	
Ignition of gas						2
Premature ignition of black powder		1			1	1
Ignition of black powder, open lamp fell into powder						2
Fell from top of railway car	1					
Screening plant, hand caught in conveyor		1				
Tipple, finger caught in car door			1			
Hand haulage		1				
Miscellaneous		6	3			
	1	9	5	7	32	18

BITUMINOUS.

CAUSE	ABOVE GROUND			BELOW GROUND		
	Fatal	Serious	Slight	Fatal	Serious	Slight
Rope haulage, struck by flying coal, runaway cars						1
Rope haulage, runaway cars on slope displaced timber						1
Rope haulage, struck by empty cars	1					
Compressed air motor haulage, caught between motor and prop					1	1
Compressed air haulage, crushed between motor and cars					1	
Compressed air haulage, caught between car and prop					1	1
Horse haulage, caught between car and chute					1	
Horse haulage, jammed between horse and cars				1		
Horse haulage, caught between car and timber					3	1
Horse haulage, caught between cars	1					
Gasoline motor haulage, asphyxiated by exhaust fumes						1
Storage battery electric haulage, timber displaced, cutting off 3 fingers				1		
Fall of coal at face of angle				1	2	
Fall of coal in pillar						1
Fall of coal in chute				1		
Fall of coal at face of counter entry				1	3	1
Fall of coal at face of room				1		
Fall of coal on counter level				1		
Fall of coal displacing timber				1		
Fall of rock at face of room				1	1	2
Fall of cap rock in pillar					2	1
Fall of rock at face of entry					2	
Fall of rock in chute					1	
Fall of rock from roof at face of room				1		1
Rock tunnel, fall of rock off sides				4	1	
Asphyxiated by gas						
Shot-firing, struck by flying coal						1
Fall of timber while placing same					1	
Premature explosion of detonator			1			
Scalded by hot water from boiler manhole	1					
Railway cars; fell off cars, crushed foot		1				
Miscellaneous	3	1	1	13	20	15

No accidents were reported as having occurred in the Anthracite Coal Field.

Table showing accidents during 1917 classified according to the Mines in the LIGNITE field at which they occurred:

Name of Operator	District	Above Ground			Below Ground			Total above and below		
		Fatal	Serious	Slight	Total	Fatal	Serious		Slight	Total
John W. Riley	Pincher Creek		1		1				1	1
Can. Pac. R. R. No. 3	Lethbridge								3	3
Can. Pac. R. R. No. 6	Lethbridge		1	1	2		5		9	11
Federal Coals, Ltd.	Lethbridge		1		1					1
North American Collieries, Ltd.	Lethbridge									2
Chinook Coal Co., Ltd.	Lethbridge	1			1		2		3	4
Federal Coals, Ltd.	Lethbridge			1	1					1
Canada West Coal Co., Ltd.	Lethbridge					1				1
Redcliff Brick & Coal Co.	Medicine Hat								3	3
Rosedale Coal & Clay Pro.	Drumheller		1		1		2		2	3
Rose-Deer Coal Mining Co.	Drumheller					1	1		2	3
Drumheller Land Co., Ltd.	Drumheller							1	1	1
Midland Collieries, Ltd.	Drumheller					3			4	4
North American Collieries, Ltd.	Drumheller					1			1	1
Sterling Coal Co., Ltd.	Drumheller		1		1				1	1
Star Coal Mines, Ltd.	Drumheller					1				1
Premier Coal Co., Ltd.	Drumheller					1			3	3
Alberta Block Coal Co., Ltd.	Drumheller						1		1	1
Western Commercial Co., Ltd.	Drumheller		1	1	1				1	1
Western Gem Mining Co., Ltd.	Drumheller				2		2		5	7
Big Valley Collieries, Ltd.	Big Valley		1		1			1	1	2
Calgary Collieries, Ltd.	Trochu						1		1	1
The Ellis Coal Co., Ltd.	Three Hills									1
North American Collieries, Dodds	Camrose		1		1					1
Great West Coal Co., Ltd.	Clover Bar					1			1	2
Humberstone Coal Co.	Clover Bar		1		1				1	1
Dawson Coal Co., Ltd.	Edmonton					1			1	1
Twin City Coal Co., Ltd.	Edmonton						1		1	1
Cardiff Collieries, Ltd.	Cardiff			1	1				2	3
Blain & Gilliland	Cardiff						1		1	1
Alberta Coal Mining Co.	Cardiff								1	1
North American Collieries, Ltd.	Pembina	1	9	5	15	7			57	72

Table showing accidents during 1917 classified according to the Mines in the BITUMINOUS field in which they occurred

Name of Operator	District	Above Ground				Below Ground				Total above and below
		Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
Hillcrest Collieries, Ltd.	Crow's Nest Pass						3	2	5	5
Franco-Canadian Collieries, Ltd.	Crow's Nest Pass	1			1	1			1	2
West. Can. Collieries, Ltd., Bellevue	Crow's Nest Pass					2		4	11	11
International Coal & Coke Co., Ltd.	Crow's Nest Pass	1			1		5	1	4	5
McGillivray Creek Coal & Coke Co.	Crow's Nest Pass					1	2	3	3	3
West Can. Coll., Ltd., Greenhill	Crow's Nest Pass	1		1	2		1		1	3
Canmore Coal Co., Ltd.	Canmore						1	1	2	2
Brazeau Collieries, Ltd.	Brazeau					1			1	1
Saunders Creek Dom. & Steam Coal	Brazeau							2	2	2
Jasper Park Collieries, Ltd.	Jasper Park					4			4	4
Blue Diamond Coal Co., Ltd.	Jasper Park		1		1		1	1	2	3
Oliphant-Munson Collieries, Ltd.	Yellowhead Pass								1	1
Yellowhead Coal Co.	Yellowhead Pass					1	3		4	4
North American Collieries, Ltd., Lovett	Yellowhead Pass					1			1	1
Mountain Park Coal Co., Ltd.	Mountain Park					2	3	1	6	6
		3	1	1	5	13	20	15	48	53

No accidents were reported as having occurred in the Anthracite Coal Field during the year 1917.

LIST OF PROSECUTIONS UNDER THE MINES ACT DURING 1917.

Mine in Which Contravention was Committed	Description of Defendant	Offence Charged	Result of Proceedings	Penalty	Costs
McGillivray Creek Coal & Coke Co., Ltd.	Coal Miner	That he did fail to set sprags during the process of undercutting coal by hand. (Section 75)	Convicted	\$15.00 fine or one month	\$5.25
McGillivray Creek Coal & Coke Co., Ltd.	Coal Bucker	That he did ride on cars in the mine without the permission of the manager. (Section 103)	Convicted	\$15.00 fine or one month	\$5.25
McGillivray Creek Coal & Coke Co., Ltd.	Coal Miner	That he did fail to set sprags during the process of undercutting coal by hand. (Section 75)	Convicted	This was an appeal from a previous conviction; the conviction was confirmed, also costs and fine with costs of appeal which amounted to \$25.00	\$5.25
West Canadian Collieries, Ltd.	Miner	That he not being a competent person appointed by the manager to light safety lamps below ground, did have in his possession a contrivance for lighting a safety lamp below ground. (Sub-sec. 3 of Sec. 4 Gen. Reg. under Sec. 138 of The Mines Act)	Not Convicted.		
West Canadian Collieries, Ltd., Greenhill	Coal Miner	That he did fail to work his place according to the directions or orders of the manager, overman or examiner. (Sec. 114, sub-sec 6)	Convicted	\$10.00 or one month imprisonment with hard labor	\$6.50

LIST OF PROSECUTIONS—Continued

Mine in Which Contravention was Committed	Description of Defendant	Offence Charged	Result of Proceedings	Penalty	Costs
West Canadian Collieries, Ltd., Greenhill	Coal Miner	That he did fail to work his place according to the directions or orders of the manager, overman or examiner. (Sec. 114, sub-sec. 6)	Convicted	\$10.00 or one month imprisonment with hard labor	\$6.50
West Canadian Collieries, Ltd., Greenhill	Miner	That he did return his safety lamp to the lamp house in a damaged condition and did fail to give notice of the damage to the overman or examiner or, to some other person in authority in the mine contrary to Sub-section 2 of Section 4 of General Regulations Under Section 138 of The Mines Act.	Convicted	\$5.00 or one month in prison	\$9.25

MINE RESCUE AND FIRST AID WORK.

Mine Rescue Stations are in operation at the mines operated by the Canadian Pacific Railway Co. Dept. Natural Resources, Lethbridge; the North American Collieries, Ltd., Coalhurst; the Chinook Coal Co., Ltd., Commerce; the Jasper Park Collieries, Ltd., Pocahontas; the Brazeau Collieries, Ltd., Nordegg, and the Mountain Park Coal Co., Ltd., Mountain Park.

In addition to these stations there are also three cars in operation. Car No. 1 visits all the mines in the Crow's Nest Pass District, Car No. 2 the mines at Bankhead and Canmore and Car No. 3 the mines in the Drumheller and Big Valley districts.

Car No. 1 is under the charge of Mr. Henry James; Car No. 2, Mr. William B. Powell, and Car No. 3, Mr. Samuel Troman. The Lethbridge, Coalhurst and Commerce stations are under the charge of Mr. Thomas Longworth, the Pocahontas station Mr. James Clyne and the Nordegg station Mr. James M. Stewart and the Mountain Park station Mr. James Derbyshire.

The Superintendents in charge of the cars and the Lethbridge, Coalhurst and Commerce stations, devote their whole time to instruction in first aid and mine rescue work, while the superintendents of the other stations are employed at the mines where the stations are situated and devote whatever portion of their time is necessary to this work.

Both Mr. S. Troman and Mr. Thomas Longworth are returned soldiers and it is intended that when consistent with efficiency returned soldiers will be appointed in future as Superintendents of all mine rescue stations and cars.

The cars are fully equipped for mine rescue work and are divided into lecture room, office, kitchen and toilet. A small engine and dynamo and a set of storage batteries for re-charging electric lamps that are used by the men when in training, have been installed on each car; these plants also supply light for the cars. Provision is also made for sleeping and cooking accommodation for persons engaged in mine rescue work. The cars can either be heated by heaters installed in the cars or by steam supplied from the mines at which they are stationed.

DEPARTMENT OF PUBLIC WORKS

The following is the equipment kept in each car and station :

Equipment	CAR			Leth- bridge Station	Coal- hurst Station	Com- merce Station	Nor- degg Station	Poca- hontas Station	Totals
	No. 1	No. 2	No. 3						
Breathing apparatus (Proto) -----	10	10	.5	10	5	5	5	6	56
Compression pump (Proto) -----	1	1			1		1		4
Compression pump (Draeger) -----			1	1		1		1	4
Pulmotor Type A -----	1	1	1	1	1	1	1	1	8
Pulmotor Type B -----									1
Lungmotor -----		1		1				1	2
Inhalation apparatus -----	1	1		1			1		5
Animal air tester -----	1	1		1	1	1	1	1	8
Meter for testing Reducing Valves -----	1	1	1	1	1	1	1	1	8
Electric cap lamp (Edison type) -----	12	1	1	1	1	1	12	12	48
Electric cap lamp (Wico type) -----		12	12						12
Stretchers -----	2	1	1	2	1	1			10
First aid cabinet -----	1	1	1	1	1		1		5
Oxygen storage cylinders, 100 cu. ft. capacity (Proto) -----	12				5	5	9	10	49
Oxygen storage cylinders, 150 cu. ft. capacity (Draeger) -----		6	8						14
Stick caustic soda -----	972 lbs.	600	376	236	568	110	700	625	4,217 lbs.
Lump caustic soda -----	1,056 lbs.	1,690	2,500	1,760	1,588	400	1,914	2,060	12,968 lbs.
Smoke helmets -----	6	6		5	5		3	3	28
Canvas tent, 12 ft. x 14 ft. -----		1							1
Rectifier for re-charging electric lamps -----					1			1	2

A sufficient supply of spare parts is also kept at each station and car so that repairs can be promptly made should any portion of the apparatus become defective at any time.

Provision is also made at each station and car for re-charging the portable electric lamps, by the electric plant at the mine at which the station or car is located, so that these lamps can be charged without having to be removed from the car. This is in addition to the electric generating plant which is installed on each car.

All the apparatus used in the Province is of the Proto type and is capable of being used for at least two hours' continuous work. All the Proto electric hand lamps formerly used at the stations and cars have now been discarded and replaced by electric cap lamps of the Edison and Wico types; these have proved to be more satisfactory for this class of work. At the Lethbridge, Coalhurst and Commerce stations the electric lamps used by the miners at these mines are used also by the men being trained with the apparatus.

Although a large number of men have enlisted for overseas service from the mines throughout the Province, the training in connection with first aid and mine rescue work has been carried on satisfactorily, 219 men having undergone training in mine rescue work and 122 men in first aid work during the year 1917.

Classes for the purpose of giving instruction in first aid have been carried on at a large number of mines with the result that those who attended these classes have been successful in obtaining first aid certificates from the St. Johns Ambulance Association.

The schedule of training at the stations and cars is as follows:

FIRST DAY.

Explanation of the apparatus by the Superintendent and demonstration with the pulmotor, lungmotor and inhalation apparatus, compression pump and animal air tester.

SECOND DAY.

Each member of the crew takes apart and assembles the apparatus, repeating the same until all are fully familiar with each part. Each member of the team demonstrates the application of the pulmotor, lungmotor and inhalation apparatus.

THIRD DAY.

Each member of the team wears the apparatus for two hours in fresh air while walking a distance of 1 mile.

FOURTH DAY.

Each member of the team wears the apparatus 1 hour in fresh air and 1 hour in smoke room in vitiated atmosphere, making five trips through a tunnel 35 feet in length by 18 inches in height by 24 inches in width.

FIFTH DAY.

The members of the team wear the apparatus for two hours in a vitiated atmosphere in the smoke room and build a brick stopping 6 feet square.

SIXTH DAY.

The members of the team wear the apparatus two hours in a vitiated atmosphere in the smoke room and build a brick stopping 6 feet square, after which they make 10 trips through a tunnel and carry 1,000 lbs. of rock a distance of 30 feet.

SEVENTH DAY.

Team makes a trip underground carrying a stretcher for a distance of two miles.

EIGHTH DAY.

The work done on the seventh day is repeated.

NINTH DAY.

The work done on the sixth day is repeated.

TENTH DAY.

Team wears the apparatus for two hours and transports a weight of 100 lbs. on a stretcher up an incline rising 1 and 7 and 1,000 yards in length, then proceeds into a vitiated atmosphere in the smoke room and builds a brick stopping 6 feet square with a regulator 24 inches square through which a man is carried on the stretcher.

At the finish of each period of training each member of the team is required to thoroughly clean the apparatus he has been using and to re-charge the small cylinder and reassemble the apparatus, leaving it ready for use.

The complete course lasts ten days of two hours each. The method of procedure in the past has been that six months after this course was concluded the person who had undergone training was required to present himself for another day's training, after which if he was found to be satisfactory, a certificate was awarded to him.

Arrangements have now been made that in future examinations will be held at each car and station during the months of March and April in each year, of all persons who have taken a course of instruction during the previous year, before certificates will be granted for efficiency in Mine Rescue Work.

No calls have been made during the year for the apparatus although on four different occasions requests were made from Frank, McGillivray, Coleman and Bellevue for the use of the pulmotor for children who were suffering from pneumonia. Two of these children recovered. The pulmotor was also used in four cases of alleged asphyxiation at Jasper Park but without giving any beneficial results.

The following table gives particulars as to the number of persons trained in first aid and mine rescue work at the different mines in the Province since this work was first organized, but does not include those who may have been trained elsewhere than in the Province:

Name of Mine	No. of persons trained previous to 1917		No. of persons trained during 1917	
	Mine Rescue	First Aid	Mine Rescue	First Aid
C. P. R. No. 6 Mine -----	95	80	12	13
C. P. R. No. 3 Mine -----	35	30	5	7
North American Collieries, Ltd. -----	63	60	10	17
Chinook Coal Co., Commerce -----	20	25	14	18
Canada West Coal Co., Taber -----	40	40	-----	-----
Rock Springs Coal & Brick Co., Ltd. ---	15	10	-----	-----
West Canadian Collieries, Ltd., Blair- more -----	28	10	5	0
West Canadian Collieries, Ltd., Bellevue	49	30	19	0
McGillivray Creek Coal & Coke Co. Ltd.	21	20	9	20
Leitch Collieries, Ltd., Passburg -----	10	10	-----	-----
International Coal & Coke Co., Ltd. ---	31	50	7	22
Hillcrest Collieries, Ltd. -----	21	5	6	0
Franco-Canadian Collieries, Ltd. -----	15	0	5	0
Burmis Coal Co., Ltd. -----	10	5	-----	-----
Maple Leaf Coal Co., Ltd. -----	5	5	-----	-----
Brazeau Collieries, Ltd. -----	45	20	12	15
Canmore Coal Co., Ltd. -----	40	12	15	0
C. P. R. Bankhead -----	30	10	5	0
Georgetown Collieries, Ltd. -----	13	0	0	0
Jasper Park Collieries, Ltd. -----	40	20	10	10
Western Commercial Co., Ltd. -----	-----	-----	10	-----
Rose-Deer Coal Mining Co., Ltd. -----	-----	-----	10	-----
Western Gem Mining Co., Ltd. -----	-----	-----	10	-----
Rosedale Coal & Clay Products Co., Ltd.	-----	-----	5	-----
Drumheller Land Co., Ltd. -----	-----	-----	5	-----
Premier Coal Co., Ltd. -----	-----	-----	5	-----
Star Coal Mines, Ltd. -----	-----	-----	5	-----
Alberta Block Coal Co., Ltd. -----	-----	-----	5	-----
Newcastle Coal Co., Ltd. -----	-----	-----	5	-----
Midland Collieries, Ltd. -----	-----	-----	10	-----
Red Deer Valley Coal Co., Ltd. -----	-----	-----	5	-----
Sterling Coal Co., Ltd. -----	-----	-----	5	-----
Big Valley Collieries, Ltd. -----	-----	-----	5	-----
	626	422	219	122

It will be noted from this table that 845 men have undergone training with mine rescue apparatus and 544 men in first aid work.

The contest which was to be held at Lethbridge during September, 1917, for mine rescue and first aid work, owing to the unsettled condition of labour, was postponed until the year 1918.

In addition to the apparatus provided at the stations and cars the following mines have installed resuscitation devices:

Name of Mine	Pulmotor		Lungmotor
	Type A	Type B	
West Canadian Collieries Ltd., Bellevue	2	-----	1
International Coal & Coke Co., Ltd.	1	-----	-----
Hillcrest Collieries, Ltd.	-----	-----	1
	3	-----	2

The No. 3 car was forwarded to Calgary during the month of August and equipped with a gasoline engine and dynamo, also storage battery for re-charging the batteries for the Edison electric cap lamps and for lighting the car.

Arrangements have been made whereby two teams are selected from the trained men at each mine and each member of the team is required to take at least three hours' training during each month, for which he is paid 50c per hour. This payment is made by the Provincial Government on receipt of a time-sheet from the superintendent of each car and station.

The teams are composed of five men each, one of whom is appointed captain. These arrangements were put into effect on the 1st of November, 1916, and are giving satisfaction.

Before any person is allowed to commence training with the use of the mine rescue apparatus he is required to undergo a very strict medical examination.

The Canadian Mining Institute has installed at each station and car a branch library and provides the following publications:

Coal Age, Colliery Engineer, Science and Art of Mining and the Colliery Guardian, to which all mine employees and mining students have access.

All expenses and salaries in connection with the equipment and operation of the stations and cars are paid by the Provincial Government, the mine operators being assessed one-half of the cost at the end of each calendar year. This arrangement was put into effect when the mine rescue work was commenced in the Province and is working satisfactorily.

During the year no accidents have occurred in connection with the training of mine rescue crews. The Proto apparatus has proved to be very satisfactory and training at all stations and cars has been carried on very efficiently during the year.

List of Names of Holders of Mine Rescue Certificates Issued by the
Government of the Province of Alberta during 1917.

NAME	ADDRESS	CERT. NO.	DATE ISSUED
Ashurst, William	Coleman	327	26-4-17
Barrie, James	Coalhurst	264	18-1-17
Brooks, John	Bellevue	273	24-1-17
Bastian, Thomas W.	Bankhead	286	4-4-17
Brownrigg, John H.	Bankhead	296	4-4-17
Blake, Henry	Bellevue	316	12-4-17
Brown, Hugh	Commerce	317	19-4-17
Boulson, John	Commerce	318	19-4-17
Beveridge, Andrew	Commerce	319	19-4-17
Brown, David	Commerce	321	19-4-17
Bennett, Isaac	Armada	330	30-5-17
Cooper, John A.	Lethbridge	266	18-1-17
Coutts, Anthony	Hardieville	268	18-1-17
Campbell, David	Lethbridge	269	18-1-17
Clarke, John	Bankhead	289	4-4-17
Coles, John J.	Bankhead	303	4-4-17
Clyne, James	Pocahontas	309	4-4-17
Coupland, George	Frank	313	11-4-17
Embree, Merton B.	Bankhead	295	4-4-17
Evans, Llewellyn	Coleman	324	26-4-17
Foster, James	Lethbridge	275	24-1-17
Goodwin, Andrew	Bellevue	272	24-1-17
Givens, John	Bankhead	300	4-4-17
Holland, Thomas	Lethbridge	270	18-1-17
Hamilton, John	Lethbridge	280	6-3-17
Hartley, William	Bankhead	297	4-4-17
Hastings, Andrew P.	Bankhead	298	4-4-17
Higgins, Alexander	Commerce	323	19-4-17
Holmes, Robert	Coleman	325	26-4-17
Kehauegh, J. W.	Coalhurst	263	18-1-17
Kerr, William R.	Nordegg	333	26-6-17
Laxton, George	Coalhurst	262	18-1-17
Longworth, Thomas	Lethbridge	271	24-1-17
Lote, Frank	Hillcrest	284	28-3-17
Littler, Robert	Bankhead	291	4-4-17
Littler, John	Bankhead	292	4-4-17
Morrissey, Joseph	Coalhurst	265	18-1-17
Miller, William	Commerce	278	19-2-17
Muir, Samuel	Bankhead	299	4-4-17
Musgrove, John T.	Canmore	307	4-4-17
MacAskill, Alexander	Drumheller	277	29-1-17
McKinnon, John L.	Coleman	282	28-3-17
McLeod, John A.	Bankhead	301	4-4-17
McKeen, George	Bellevue	315	12-4-17
McLellan, John	Nordegg	335	20-6-17
McQueen, Andrew	Nordegg	336	20-6-17
Nanson, Thomas H.	Bellevue	314	11-4-17
Oakes, Robert	Bankhead	290	4-4-17
Oakes, William	Bankhead	293	4-4-17
Oblok, Frank	Canmore	306	4-4-17

LIST OF NAMES OF HOLDERS—*Continued*

NAME	ADDRESS	CERT. NO.	DATE ISSUED
Prescott, William -----	Hillcrest -----	281	22-3-17
Polutnik, Anton -----	Canmore -----	305	4-4-17
Pallett, Alfred -----	Commerce -----	320	19-4-17
Pocock, John -----	Commerce -----	322	19-4-17
Robinson, James -----	Commerce -----	328	3-5-17
Stevenson, William -----	Lethbridge -----	267	18-1-17
Stewart, Robert T. -----	Hillcrest -----	274	24-1-17
Stratton, James M. -----	Taber -----	285	28-3-17
Schriber, Joseph -----	Canmore -----	304	4-4-17
Sandina, Joseph -----	Canmore -----	312	4-4-17
Smith, Thomas -----	Coleman -----	326	26-4-17
Shanks, John -----	Nordegg -----	331	20-6-17
Snarey, George -----	Nordegg -----	332	20-6-17
Stevenson, William, Jr. -----	Blairmore -----	339	20-6-17
Stewart, George W. -----	Nordegg -----	340	20-6-17
Thachuk, Nicholas D. -----	Canmore -----	311	4-4-17
Tennant, John -----	Lethbridge -----	329	3-5-17
Turner, Leonard -----	Nordegg -----	337	26-6-17
Terris, Andrew -----	Nordegg -----	338	26-6-17
Willets, Frederick -----	Lethbridge -----	276	24-1-17
Walstoncroft, Robert -----	Commerce -----	279	19-2-17
Warne, Walter R. -----	Bellevue -----	283	22-3-17
Watters, John -----	Bankhead -----	287	4-4-17
Wheatley, Frank -----	Bankhead -----	294	4-4-17
Watters, Alexander G. -----	Bankhead -----	302	4-4-17
Williams, Thomas B. -----	Canmore -----	308	4-4-17
Wardrop, James -----	Canmore -----	310	4-4-17
Whyte, Robert -----	Nordegg -----	334	20-6-17

INVESTIGATIONS FOR COAL, OIL, GAS, AND ARTESIAN
WATER IN WESTERN CANADA.*(D. B. Dowling.)*

COAL.

Alberta.—The locations of new areas in which coal mines have been opened in Alberta during the past year seem to have been determined by the advance of railway construction. The settlement of the Grande Prairie district has been followed by the opening of seven small mines, evidently to supply coal for local consumption. The total output of the mines in the province has been greatly increased and the larger mines in the mountain and foothill areas have resumed work on as large a scale as labour conditions permit. In the general work of exploration or tracing out new areas, our efforts have been resumed in the foothills north of the Grand Trunk Pacific railway. It may be said that more or less definite information is already at hand or published concerning the location of the principal coal fields from the International Boundary to Athabaska River. From there north to Sheep Creek, a branch of Smoky River, John MacVicar has traced portions of three folds or basins of the coal-bearing series and has determined the thickness and character of many of the coal seams found. His report shows the great value of this new area, not only in the possible amount of coal available, but also in the high character of the coal sampled.

Several of the mines recently established in the edge of the mountains and connected to the markets by railways, were visited by J. S. Stewart who contributes descriptions of the measures at Nordegg, Lovett, Coalspur, and Entwistle. The last mentioned is on the main line of the Grand Trunk Pacific Railway, Lovett and Coalspur are on branch lines, and Nordegg is the terminus of a branch of the Canadian Northern Railway in the valley of the North Saskatchewan River.

A general study of all the coal areas between Pincher Creek and Fernie is being made by Bruce Rose. This investigation is dependent on the progress made in mapping the area and will extend northward to latitude 50 degrees.

A report embracing the results of a previous season's study of the geological formations of the plains of Southern Alberta has been written and includes notes on the distribution of the coal areas. This report, with map illustrations, is in press and will shortly appear as Memoir No. 93.

A personal visit was made to the mines opened in the valley of Red Deer River at Drumheller. Two seams of coal are being mined and this locality is becoming of importance.

The production of small coal at all the mines is probably greater than that of the mines of the coast areas. Where the coal is of a coking quality this is easily disposed of in making coke or used in run of mine coal. Where the coal is non-coking, the problem has been difficult. The anthracite small coal at Bankhead has been successfully briquetted; but the small coal from the sub-bituminous mines of the prairie has been generally wasted. Experiments at the power stations of Edmonton, Prince Albert and Saskatoon have demon-

strated the feasibility of burning this fine coal and thereby cheapening the cost of power. It is hoped that by this means the waste will be greatly lessened.

Saskatchewan.—The main productive coal areas of Saskatchewan seem to be those in the southern portion of the province, although isolated seams have been found in the western part. An examination of the Wood Mountain-Willowbunch area was conducted by Bruce Rose during the seasons of 1913-1914, and a summary report was published. His final report and map, giving greater detail, is now available as Memoir No. 89. The large area lying east of this, on which the only available information is contained in "Report on the Souris coal field," is being investigated by A. MacLean, who spent the past season in this field and contributes a short summary report.

The coal of Saskatchewan is of lower quality than that of Alberta and may be called a black lignite. It is available for immediate use in ordinary stoves but disintegrates rapidly on exposure owing to its high moisture content. To provide a stable fuel of greater value, the provincial government has carried out a series of experiments on the possibilities of drying and briquetting and of charring and briquetting. The latter process seems to be commercially successful, the resulting fuel being of about the grade of the coal mined at Lethbridge, Alberta. The problems to be solved are the finding of a suitable binder for the briquettes and the utilization of the surplus gases given off in the charring of the lignite. This process allows of the collection of many of the by-products of distillation and seems to open up a fruitful field of study in the way of developing industries for treating these by-products.

OIL.

Alberta.—Boring during the past season has been confined to three widely separated areas: Sheep River area southwest of Calgary; Viking area east of Edmonton, and the area at Peace River Landing. In the Sheep River area the boring has been for the purpose of extending the area known to produce oil; thus, in the vicinity of the Dingman well from which a small amount of oil has been obtained, it is proposed to drill another well near the northern edge of the property and near the producing well of the Southern Alberta Company. The latter company have also drilled a second well. Small flows of oil have been found in the wells to the south and west of the Dingman.

In the Viking area, a small showing of a dark, thick, asphaltic oil was obtained in the second well put down in that district. These wells were bored primarily for natural gas; and the oil indications, though small, are interesting, but do not affect the general policy of boring.

In the Peace River area a well has been drilled near the banks of the river below Peace River Landing. According to newspaper report, some oil was obtained at comparatively shallow depths in the Peace River sandstones. Apparently the tar sands exposed on Athabaska River were not reached.

NATURAL GAS.

Alberta.—The gas fields of the southern portion of the province form the subject of a very interesting compilation by Mr. Slipper.

From a study of the general structure of the area and of the borings south of Foremost he finds that the area has much greater possibilities than formerly supposed; it may even be surmised that in the anticline which extends to the International Boundary, gas fields, possibly of greater producing value than those now proved, will be found. Of the two sandstone formations underlying the anticline the upper is exposed in Milk River valley and has become saturated for a long distance with fresh water from the river, thereby retaining the gas. The Medicine Hat natural gas is derived from this sandstone. The lower sandstone outcrops on the sides of the Sweet Grass hills; but by intersecting dykes of igneous material the outlet which would have been formed at the outcrop has been practically closed. The gas has accumulated in the part of the section which is about 300 feet above sea-level. Below that level, salt water is present. Several tests of the gas have been made for the presence of gasoline and small amounts are reported to have been obtained by absorption in heavier oils.

The value of the gas as fuel is satisfactory. Tests for the production of carbon black were made at the request of Arthur D. Little, Limited, Montreal, and the results will probably be published by them.

The presence of gas at Foremost should stimulate the manufacture there of clay products, especially as the completion of the Weyburn branch of the Canadian Pacific Railway will give access to the fireclay deposits of the Cypress hills, which are probably capable of furnishing material for many grades of earthenware. Gas is still being obtained from the Dingman well on Sheep River and is used for power purposes at the wells being drilled in the vicinity.

A small flow of gas has been obtained in various wells east of the Calgary-Edmonton railway. The latest reported find is at Ponoka, in a well drilled by the local government for the provincial asylum. Extensive preparations are being made to bore for gas on the anticline east of Edmonton. Five wells have been bored at Viking on the line of the Grand Trunk Pacific Railway and fairly satisfactory results obtained, but the flow of gas is not sufficient for a large city. The results at Viking have stimulated exploration in other parts of the district and several borings are to be started in the area to the southeast with a view to securing a supply of natural gas for the cities in Saskatchewan. A personal visit was paid to the area south of Sounding Lake, where, it was reported, the underlying rocks lay in inclined positions indicating possible lines of fracture. Several of the exposures seen show that the area will require very close study to determine the structure and its possible bearing on oil and gas possibilities. The northern edge of the anticline was visited by J. S. Stewart toward the close of the field season; but as the visit was intended to be preliminary to a general survey of the field later, no detailed report has been prepared.

FOOTHILL COAL AREAS NORTH OF THE GRAND TRUNK
PACIFIC RAILWAY, ALBERTA.*(John MacVicar.)*

INTRODUCTION.

During the months of June, July, August and September, 1916, the writer carried on exploration work in the coal areas north of the Grand Trunk Pacific Railway, leaving the railway at Brule Lake, Alberta. The main object of the work was to determine the geographical position of certain coal areas in the region.

The surveys made by the party were transit, compass, reconnaissance surveys. The Canadian Northern Railway, and various companies and individuals, have furnished maps and other valuable information. For this assistance the writer gratefully acknowledges his indebtedness.

LOCATION.

The area under discussion is located in the western part of the province of Alberta. From Brule Lake, in tp. 49, range 27, W. 5th mer., the area extends in a northwesterly direction to tp. 59, ranges 7, 8 and 9, W. 6th mer. The coal measures are found not to terminate there but to extend farther in a northwesterly direction. Northwest from Brule Lake as far as Hay River the coal measures are terminated on the west by the highly inclined lower and older rocks of Carboniferous age which form the outer range of the Rockies. On the east they pass under higher and newer Cretaceous strata. This outer area was not followed northward from Hay River. The area followed is that lying between the outer and second limestone ranges which terminate the area on the west and east, the coal occupying the basin or trough-shaped area between. From Muskeg River northward the area is in front of the outer range of the Rockies, that is, the outer range is covered by the newer strata and the second range becomes the outer range.

SUMMARY AND CONCLUSIONS.

The strata throughout the district consist wholly of sedimentary rocks ranging in age from the Devonian-Carboniferous to Upper Cretaceous and Quaternary.

Limestone forms the outer and second ranges of the Rockies but the rocks of the lower ridges and valleys are chiefly sandstones, shales and conglomerates interbanded with seams of coal. The rocks are very much folded and faulted by strike faults, thus giving rise to a number of parallel bands of the coal measures. The valleys of the larger streams are bordered by stream terraces of sand and gravel.

The economic deposits are coal, gypsum, sand and gravel. To these may be added clay, shale and limestone.

The coal is bituminous in character and suitable for steam, metallurgical and domestic use.

At least one seam may be classed as anthracite, comparable with the best coal mined at Bankhead on the Canadian Pacific Railway. This seam is in the Smoky River area. The physical qualities of this is such as in mining will give a high percentage of lump.

GENERAL CHARACTER OF THE DISTRICT.

Topography.

The district under discussion falls naturally into three topographical divisions. The southern extends from Brule Lake northward to Hay River. This is situated immediately in front of the outer range of the Rockies whose crest line exhibits a rough saw-toothed arrangement of peaks. In front of this the foothills form a succession of ridges of even crest line and elevation. At intervals these are dissected by the small transverse drainage streams that head in the outer range. Solomon Creek drains the southern end of this district and flows into Athabaska River. Hay River receives a couple of small creeks from the northern end of the division.

The middle division occupies a basin-like depression between the first two limestone ranges of the Rockies. The general elevation of the basin is between 1,000 and 2,000 feet below the ranges and about 3,000 feet above the valley of the Athabaska River and Brule Lake. The distance between the two ranges is from 6 to 8 miles. Traversing the middle division are well-defined ridges running parallel with the bordering ranges and resembling the foothill ridges. Hay River crosses the south end and receives its north branch which with its tributaries drain the south half of the division. The northern portion is drained by Baptiste and Muskeg rivers and their tributaries. These occupy rather small valleys that end in the second range.

The northern division exhibits a general foothill appearance. The outer range of limestone, which borders the middle division, disappears at the north branch of the Baptiste River. The second range crosses Sulphur River just above the mouth of Walton Creek and continues in a westerly direction up the east side of Smoky River but some miles from it. The direction of the hills is northwest. The general elevation is 1,000 to 2,000 feet lower than that farther south. Draining the area are Smoky River and its tributaries, Muskeg and Sulphur rivers, and Sheep Creek. Smoky River occupies a broad and deep U-shaped valley. Muskeg River near its headwaters occupies a typical V-shaped valley which soon becomes rather broad and shallow as it winds through the hills. For the last 10 or 12 miles of its course it is in a canyon 50 to 100 feet deep. Sulphur River is in a rather narrow U-shaped valley as far as the mouth of Walton Creek where it enters a canyon over 100 feet deep. This continues to its mouth. For about 10 miles above its mouth Sheep Creek is in a canyon and from there up the valley is considerably wider. Sheep Creek is a stream about 100 feet wide and 2 feet deep. Muskeg River is about the same size, and Sulphur River is a stream 150 feet wide and 2 feet deep at low water. Smoky River is a stream of considerable size and with a swift current. It averages about 200 feet in width and is too deep to ford except at a few points and then only during low water.

ANALYSES OF COAL.

During the year the following reports were received from the Fuel Testing Station at Ottawa of mine and commercial samples of coal. Commercial samples were sent in ear load lots and mine samples in sealed jars. The results refer to the fuel as it was received at Ottawa.

Date on which sample was taken	Name of person taking sample	Kind of sample	Location of mine from which samples were taken				Proximate Analysis			Calorific value in B. T. units	Remarks
			Sec.	Trp.	Rg.	W. of M.	Moisture	Ash	Volatile Matter	Fixed Carbon	
28-10-16	John T. Stirling	Mine	9	53	4	5	24.1	6.1	27.7	42.1	No. 1 seam No. 2 room.
15-11-16	F. Aspinall	Comm.	12	10	22	4	9.8	13.3	31.4	45.5	Run of mine.
30-9-15	F. Aspinall	Comm.	9	29	20	4	16.3	8.5	29.9	45.3	Run of mine.
5-1-16	F. Aspinall	Comm.	18	7	3	5	2.0	13.8	25.2	59.0	Run of mine.
6-6-16	F. Aspinall	Comm.	19	26	11	5	1.1	18.4	10.0	70.5	Pea Coal.
17-5-16	J. A. Richards	Comm.	33	45	23	5	2.2	13.7	24.1	60.0	Run of mine.
27-5-14	E. D. Black	Comm.	6	49	21	5	5.9	10.9	35.2	48.0	Run of mine.
24-11-14	F. Aspinall	Comm.	36	7	4	5	2.8	17.8	26.2	53.2	Run of mine.
11-3-15	F. Aspinall	Comm.	2	8	4	5	2.5	11.5	24.9	61.1	Run of mine.
17-11-14	F. Aspinall	Comm.	9	29	20	4	16.5	7.6	32.1	43.8	Run of mine.
19-11-14	F. Aspinall	Comm.	29	7	3	5	2.7	18.8	25.5	53.0	Run of mine.
20-9-16	Jas. A. Richards	Mine	21	70	10	6	11.8	3.7	31.5	53.0	Run of mine.
22-9-16	Jas. A. Richards	Mine	25	70	11	6	12.3	4.0	31.2	52.5	Run of mine.
23-9-16	Jas. A. Richards	Mine	35	70	7	6	17.5	5.7	30.0	46.8	Run of mine.

The following table gives the Names and Numbers of the Districts along with the Name and Address of the District Inspector of Mines in charge of each:

No. of District	Name of District.	Name and Address of District Inspector of Mines.
1 2	Crow's Nest Pass. Pincher Creek.	William Stevenson, Junior, Blairmore, Alberta. Telephone No. 70.
3 4 5 6 7 8 9	Lethbridge Magrath. Milk River. Taber. Bow Island. Medicine Hat. Aldersyde.	Moses Johnson, 211, Sherlock Block, Lethbridge, Alberta. Telephone No. 325.
10 11 12 15 16 17 18 19 20 21	High River. Canmore. Banff. Brazeau. Brooks. Hanna. Lacombe. Trochu. Three Hills Carbon.	William Shaw, Calgary, Alberta. Telephone No. M2140.
13 14	Drumheller. Big Valley.	Duncan McDonald, Calgary, Alberta. Telephone No. M2140.
22 23 24 25 26 27 28 29 30 31 32 33 34	Battle River. Camrose. Tofield. Clover Bar. Edmonton. Namao. Cardiff. Wabamun. Pembina. Jasper Park. Yellowhead Pass. Mountain Park. Peace River.	Jas. A. Richards, 11224 99th Ave., Edmonton, Alberta. Telephone No. 82738.

LIST OF MINES.

The following table gives particulars of mines which have been opened in the Province:

Mine No.	Operator	No. of District	Location			Character of coal	Date of	
			Sec.	Tp.	Rge. of M.		Aban- donment	Re- Opening
42	Alberta Railway & Irrigation Co.	2	10	5	1	Lignite	1905	
76	Alberta Coal & Coke Co., The	2	23	7	2	Lignite	1906	
✓ 129	Alberta Coal Mining Co., Ltd.	28	23	55	4	Lignite	1907	
130	Alberta Consolidated Coal Co., Ltd.	6	3	10	17	Lignite	1907	
223	Adams Coal Mine Co., Ltd.	3	16	10	21	Lignite	1910	
270	Arblaster & Lloyd	7	5	11	11	Lignite	1911	
390	Abel, W. S.	5	3	12	4	Lignite	1913	
432	Ashmore, James	9	24	16	22	Lignite	1913	
443	Anderson, William John	17	12	29	13	Lignite	1914	
474	Armour & Stauffer	14	28	31	21	Lignite	1915	
475	Aune, George	14	22	31	21	Lignite	1915	
620	Alberta Block Coal Co., Ltd.	13	3	29	20	Lignite	1915	
632	Alberta Penitentiary	26	River Lot 20, Edmonton Settlement			Lignite	1915	
684	Atlas Coal Co.	13	10	29	20	Lignite	1917	
690	Ant Hill Coal Co., Ltd., The	14	13	32	21	Lignite	1917	
703	Acme Coal Mining Co., Ltd., The	13	7	27	19	Lignite	1917	
708	Auchenback, Andrew	5	12	7	3	Lignite	1917	
24	Big Island Coal Co.	26	L. S. 12, 13	20	51	Lignite	1897	1916
25	Banach & Hoynak	26	Near Edmonton South.			Lignite	1897	
26	Bailey, Robert	27	Near St. Albert.			Lignite	1897	
34	Bangs, J. A.	10	Sheep Creek near Lineham.			Lignite	1897	
45	Baldwin, J.	26	Near Edmonton.			Lignite	1900	
46	Bush Mine Coal Co., The	25	River Lot 42, Edmonton Settlement.			Lignite	1905	
72	Blackfoot Indians	16	Indian Reserve S. of Gleichen.			Lignite	1902	
90	Byers Brothers	25	L. S. 12	8	53	Lignite	1904	

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of	
			Sec.	Tp.	Rge. of M.		Opening	Abandonment
					W.			Re-opening
98	Consolidated with No. 90	25	L. S. 12	8	53	Lignite	1906	
117	Bothamley, C. F.	20	L. S. 10	22	31	Lignite	1906	1908
137	Bennett, Isaac	9	N. W. $\frac{1}{4}$	4	16	Lignite	1907	1915
143	Bell, W. J.	10	N. E. $\frac{1}{4}$	25	14	Lignite	1907	1913
151	Bostock, Charles	9	L. S. 15	24	16	Lignite	1907	
153	Burmis Coal Co.	1	N. E. $\frac{1}{4}$	14	7	Bituminous	1907	1916
167	Ben Nevis Mines, Ltd., The	18	S. E. $\frac{1}{4}$	11	39	Lignite	1908	1916
168	Beaver Dam Coal Co.	18	N. E. $\frac{1}{4}$	2	39	Lignite	1908	1913
176	Bradshaw Mining Co.	4		2	7	Lignite	1908	1913
206	Burdett City Coal Co.	7		23	10	Lignite	1909	1910
229	Berford, Edward	6		18	10	Lignite	1910	1917
232	Bawlf Collieries, Ltd., The	23	L. S. 11	10	46	Lignite	1910	1913
234	Baker, Hoge & Baker	16		11	17	Lignite	1910	1916
237	Blain & Gilliland	28		24	55	Lignite	1910	
240	Bevier, S. G.	18	L. S. 5	32	29	Lignite	1910	1914
245	Bish Bros. & Le Gear	22	N. W. $\frac{1}{4}$	36	40	Lignite	1910	
248	Bish Bros. & Company	22	L. S. 13	1	41	Lignite	1910	1913
256	Brazeau Collieries, Ltd.	15	L. S. 4	22	40	Lignite	1910	
284	Big Chief Coal Mining Co., Ltd.	5	N. W. $\frac{1}{4}$	9	1	Bituminous	1910	
288	Baines, Herbert	18	N. W. $\frac{1}{4}$	28	39	Lignite	1911	1913
300	Bullock Coal Mining Co.	2	S. E. $\frac{1}{4}$	16	6	Lignite	1911	1916
302	Battle River Collieries, Ltd.	23		7	46	Lignite	1911	1913
305	Bonnie Brae Coal & Quarries, Ltd.	11	S. E. $\frac{1}{4}$	6	26	Lignite	1911	1917
306	Bennie, James Scott	5		3	3	Bituminous	1911	1912
356	Brown, Moses	8		28	12	Lignite	1911	1914
364	Big Valley Collieries, Ltd.	14	N. E. $\frac{1}{4}$	1	36	Lignite	1912	1916
365	British Collieries, Ltd.	15	N. W. $\frac{1}{4}$	1	43	Lignite	1912	1913
372	Bathurst Mining Co.	3		5	10	Bituminous	1912	1915

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of		
			Sec.	Tp.	Rge. of M.		Opening	Abandonment	Re-opening
391	Block Coal Collieries, Ltd.	6	N. ½	19	16	Lignite	1913	1916	
401	Black, William	5	L. S. 8	10	3	Lignite	1913	1914	
404	Bergram, F.	18		18	39	Lignite	1913	1915	
416	Burns Coal Mines, Ltd., P.	11		18	6	Bituminous	1913	1915	
429	Blue Diamond Coal Co., Ltd.	31	L. S. 1	50	27	Bituminous	1914		
435	Bye, E. F.	5	L. S. 9	16	3	Lignite	1914	1914	
452	Borthwick, Alexander	2	S. W. ¼	17	5	Lignite	1914	1916	1917
454	Berford, Edward	5	L. S. 12	9	4	Lignite	1914	1915	
456	Brooks, Edmund J.	2	L. S. 9	13	28	Lignite	1914	1914	
457	Bradley & Watson	2		16	6	Lignite	1914		
464	Brooks, Burton Thomas	13	L. S. 4	23	29	Lignite	1915		
476	Blusson, Joseph	9	L. S. 9	33	15	Lignite	1915		
481	Bembridge, Arthur	5	L. S. 4	16	4	Lignite	1915	1916	1917
485	Black Diamond Oil Fields, Ltd.	10		29	14	Lignite	1915	1915	
486	Brown, Charles E.	17	L. S. 6 & 7	29	32	Lignite	1915		
490	Bryanton, I. K.	17	L. S. 14	18	33	Lignite	1915		
619	Bail, Matthew	19	N. E. ¼	10	35	Lignite	1915	1916	
647	Brisco, Frank	5	L. S. 4	3	4	Lignite	1916		
655	Brown, Samuel H.	34	L. S. 6	21	70	Lignite	1916		
659	Bennett, Isaac	9	L. S. 9	29	16	Lignite	1916		
660	Baines, Herbert	18	S. E. ¼	28	39	Lignite	1916		
665	Bergren & Anderson	18	N. E. ¼	21	39	Lignite	1916		
2	Canmore Coal Co., Ltd.	11		29	24	Bituminous	1896		
3	Canadian Pac. Ry. Dept. Nat. Res.	3	L. S. 13	6	9	Lignite	1895		
9	Clover Bar Coal Co., Ltd.	26	S. W. ¼	18	53	Lignite	1897		
14	Consolidated with No. 9	26	L. S. 1	18	53	Lignite	1897		
32	Cardiff Collieries, Ltd., The	28	N. W. ¼	24	55	Lignite	1902		

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of		
			S.	Tp.	Rge. of M.		Opening	Abandonment	Re-opening
44	Carpenter, Elia	27	S. W. $\frac{1}{4}$	17	24	Lignite	1897	1899	
62	Creswell, Charles	8	Near Medicine Hat.	55		Lignite	1902	1906	
63	Cameron, John	10	Near Okotoks.			Lignite	1902	1904	
80	Can. Pac. Ry. Dept. Nat. Res.	12		19	11	Anthracite	1903		
83	Consolidated Coal Mining Co.	8		2	5	Lignite	1905	1907	
105	Canada West Coal Co., Ltd., The	6	L. S. 7	31	16	Lignite	1905		
121	Carbon Brick & Coal Co.	21		19	23	Lignite	1906	1909	
132	Canadian Pacific Railway Co.	6	L. S. 14	7	16	Lignite	1907		
207	Carbon Hill Coal & Coke Co.	1		3	3	Bituminous	1909		
230	Cousins, R. W. K.	11	S. E. $\frac{1}{4}$	6	4	Bituminous	1910	1913	
247	Chinook Coal Co., Ltd.	3	L. S. 7	12	22	Lignite	1910	1910	
255	Conger, T. D.	19	S. W. $\frac{1}{4}$	17	38	Lignite	1910	1916	
260	Connor Coal Mining Co., Ltd.	29	S. W. $\frac{1}{4}$	14	53	Lignite	1911	1913	
293	Coal Securities, Ltd.	2		6	2	Lignite	1911	1913	
316	Cardston Coal & Coke Co.	5	N. W. $\frac{1}{4}$	26	2	Bituminous	1912	1913	
321	Campbell, Robert J.	17	L. S. 7 & 8	19	12	Lignite	1913		
339	Collins, James A.	32		33	48	Lignite	1913	1915	
386	Cameron Bros.	27	S. W. $\frac{1}{4}$	17	55	Lignite	1913	1916	
387	Cable Bros. & Williams	18	N. W. $\frac{1}{4}$	28	39	Lignite	1913	1916	
420	Clarke & Davis	27	S. E. $\frac{1}{4}$	8	55	Lignite	1913	1915	
424	Consumers' Coal Co., Ltd.	29	S. W. $\frac{1}{4}$	17	38	Lignite	1914	1917	
438	Curran, J. D.	11		22	25	Bituminous	1914	1914	
473	Cooke, W. R.	14	S. E. $\frac{1}{4}$	28	31	Lignite	1915	1916	
492	Cattenach, Donald	17		6	34	Lignite	1915	1915	
498	Carter, Marvin M.	18	N. E. $\frac{1}{4}$	6	37	Lignite	1915		
609	Carlson, John	22	S. W. $\frac{1}{4}$	22	42	Lignite	1915		
631	Charlton, Frank	19	L. S. 7	17	38	Lignite	1915		
657	Coldren, Earl	34	L. S. 3	28	83	Lignite	1916		

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of	
			Sec.	Tp.	Rge. of M.		Opening	Abandonment
658	Crawford, William H.	5	L. S. 1	15	1	26	4	1916
634	Clarke, A. C.	13	N. E. ¼	14	28	19	4	1916
693	Cadomin Collieries, Ltd.	33	L. S. 14	31	46	23	5	1917
704	Cuming, E. E.	22	L. S. 12	25	40	16	4	1917
629	Calgary Copper Co., Ltd.	12	Three miles North of Eldon.					1915
8	Daly, William	26	7	53	23	23	4	1903
115	Dodds, Currie & Hoding	21	L. S. 13	12	29	23	4	1906
152	Driggs, H. A.	7	N. E. ¼	15	10	13	4	1907
155	Dawson Coal Co., Ltd.	26	River Lot 25, Edmonton Settlement.					1907
173	Duncan, W. E.	6	29	9	16	16	4	1908
190	Durrant, R. B.	2	N. W. ¼	36	8	2	5	1909
236	Drowning Ford Coal Co., The	8	32	15	5	5	4	1910
273	Davis & Green	18	18	39	15	4		1911
385	Davis, Thomas	9	S. W. ¼	18	11	24	4	1911
287	Davidson, G. W.	14	S. E. ¼	36	25	20	4	1914
290	Davidson, R. T.	14	S. W. ¼	36	25	20	4	1911
298	Consolidated with 290	14	S. W. ¼	36	25	20	4	1911
326	Davis, W. M.	14	34	34	21	4		1911
340	Dobell Coal Co. of Tofield, Ltd.	24	35	50	19	4		1912
349	Drumheller Land Co., Ltd.	13	2	29	20	4		1912
362	Duell, Richards	10	N. E. ¼	8	18	2	5	1916
368	Duncan, J. H.	5	4	2	6	4		1915
370	Duco, John	7	30	7	8	4		1912
381	Davies, Evan T.	5	6	3	11	4		1913
425	Depew & Millar	4	8	5	20	4		1914
453	Davis & Brown	2	27	5	29	4		1915
463	Dennis, Wilson	2	31	10	2	5		1915

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of		
				Sec.	Tp. Rge. of M.		Opening	Abandonment	Re-opening
605	Donaldson, Christopherson S.	3	N. W. ¼	16	10 21	Lignite	1915	1916	
614	Dietrich Bros. & Johnson	22	L. S. 4	14	42 17	Lignite	1915	1916	
10	Edmonton Coal Co.	26	River Lot 22, Edmonton Settlement.			Lignite	1897	1904	
20	Elliot & Louisberg	26	Near Edmonton.			Lignite	1897	1898	
50	Edmonton Coal Co.	26	River Lot 20, Edmonton Settlement.			Lignite	1901	1904	
68	Evans & Robinson	26	River Lot 26, Edmonton Settlement.			Lignite	1902	1905	
70	Ellis, William	10	9	18	2 5	Lignite	1902	1911	
118	Evans, John	8	S. E. ¼	5	13 6	Lignite	1906	1907	
213	Ervine, S.	7	9	10	13 4	Lignite	1909	1914	
218	Consolidated with No. 296	9	8	16	23 4	Lignite	1909		
259	Erickson Brothers	5	32	2	15 4	Lignite	1910		
296	Ellis Brothers	9	S. W. ¼	8	16 23	Lignite	1911		
384	Ellis Coal Co., Ltd.	20	S. E. ¼	36	21 24	Lignite	1913		
410	Ensign, H. F.	7	S. W. ¼	24	12 8	Lignite	1913		
628	Eldon Mining Co., Ltd.	12	2½ miles South of Eldon.			Copper	1915	1916	1917
674	Erickson, Gerhard	3	L. S. 4	16	10 21	Lignite	1916		
448	Essex, George W.	7	L. S. 7	36	11 11	Lignite	1914		
699	Edmonton Collieries, Ltd.	25	L. S. 15	8	53 23	Lignite	1917		
701	Eno, John	13	L. S. 10	11	29 20	Lignite	1917		
712	Elcan Valley Coal Mining Co.	6	L. S. 8	4	10 17	Lignite	1917		
48	Franco-Canadian Collieries, Ltd.	1	N. W. ¼	30	7 3	Bituminous	1900		
54	Federal Coals, Ltd. (No. 1)	3	L. S. 5	35	8 22	Lignite	1902		
104	Federal Coals, Ltd. (J. O. Hanna)	3	N. W. ¼	31	9 21	Lignite	1905	1913	1917
342	Footte, J. C.	7	L. S. 9	7	9 8	Lignite	1912	1916	
351	Fortin, W.	28	25	57	25 4	Lignite	1912	1913	
600	Ferguson, David	6	4	10	17 4	Lignite	1915	1915	

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location		Character of coal	Date of		
			Sec.	Tp. Rge. of M.		Opening	Abandonment	Re-opening
656	Finigan, John K.	34	S. W. ¼	25 70 11	Lignite	1916		
667	Falkner, William	18		1 39 23	Lignite	1916	1917	
688	Furler, W. R.	21		33 20 22	Lignite	1917		
713	Federal Coals, Ltd.	3	L. S. 15	36 8 22	Lignite	1917		
13	Gibbard & Boutwell	27	S. W. ¼	17 55 24	Lignite	1898	1901	
27	Gough & O'Neil	27	Sturgeon River near St. Albert.		Lignite	1896	1898	
35	Gillespie Bros.	10	N. E. ¼	6 13 6	Lignite	1898	1909	
58	Great Northern Railway	2	South of Pincher Creek.		Lignite	1901	1906	
67	Gallagher & Hull	26	Near Edmonton South.		Lignite	1902	1903	
89	Great West Coal Co., Ltd., The	25		7 53 23	Lignite	1906	1914	
99	Great West Coal Co., Ltd., The	25	S. E. ¼	7 53 23	Lignite	1903		
127	Garneau, Larry, Jr.	26	River Lot 7, Edmonton Settlement.		Lignite	1907	1908	
162	Gillespie, Francis	4	S. W. ¼	1 7 22	Lignite	1907	1917	
184	Good, Rola B.	2	N. W. ¼	11 11 1	Lignite	1909	1911	
200	Geddes, Day & Gibb	8		2 9 6	Lignite	1909	1914	
201	Golden West Coal Mining Co., Ltd.	6	L. S. 4	18 10 16	Lignite	1909	1914	
211	Green, H. V.	18	S. E. ¼	18 39 15	Bituminous	1910	1916	
231	Georgetown Collieries, Ltd.	11	N. W. ¼	1 25 11	Lignite	1911	1911	
278	Gorgenson, Sebb	5	L. S. 9	16 3 12	Lignite	1911	1915	
283	Great West Coal Co., Ltd., The	25	S. W. ¼	6 53 23	Lignite	1911	1914	1915
289	Gray, Armour	18	L. S. 10	28 39 16	Lignite	1911	1913	
294	Gibson, George	7		25 9 13	Lignite	1911	1912	
297	Ginther, F. M.	8	S. W. ¼	12 13 9	Lignite	1911	1912	
336	Gardner, R.	8		3 16 5	Lignite	1912	1912	
352	Gainford Collieries, Ltd.	30		14 53 6	Lignite	1912	1914	
359	Grant, John A.	10		21 19 2	Lignite	1912	1913	
377	Gibson, George S.	7	L. S. 4	25 9 13	Lignite	1913		

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location				Character of coal	Date of		
			Sec.	Tp.	Rge. of M.	Opening		Abandonment		
					W.					
421	Goodie, Philip	5	L. S. 10	10	3	11	4	1913	1915	
458	Gilruth, James A.	2	L. S. 8	27	4	28	4	1914	1914	
459	Gardner, Fred	20		15	30	23	4	1914	1915	
487	Giedd, Fred	17		3	33	16	4	1915	1915	
603	Griffiths, Evan	22	L. S. 2		33	16	4	1915	1915	
623	Gordon, D. R.	19	L. S. 10	32	41	18	4	1915	1915	
645	Gwilliam, David	27	S. W. ¼	32	33	22	4	1915	1916	
672	Guthro & Barr	7	S. W. ¼	6	55	24	4	1916	1917	
687	Gibson, Samuel	7	L. S. 3	27	12	10	4	1916	1917	
			L. S. 7	25	9	13	4	1917	1917	
6	Humberstone, William	26	River Lot 12, Edmonton Settlement.				Lignite		1896	1905
17	Holloway, R.	26	Big Island, N. Saskatchewan River.				Lignite		1899	1899
40	Hillcrest Collieries, Ltd.	1	N. E. ¼	18	7	3	5	Bituminous		1905
43	Humberstone Coal Co., The	25	L. S. 15	7	53	23	4	Lignite		1899
109	Harper Coal Co.	26	River Lot 22, Edmonton Settlement.				Lignite		1906	1910
134	Henderson Brothers	9	N. E. ¼	29	16	21	4	Lignite		1907
171	Hanna & Moe	6		27	9	16	4	Lignite		1908
181	Hart, Edward	6		11	10	17	4	Lignite		1908
189	Hedstrom Brothers	21	S. E. ¼					Lignite		1908
209	Head Syndicate, Ltd.	1	S. W. ¼	7	29	22	4	Lignite		1909
212	Hilker, Carl Gus	18		9	7	4	5	Bituminous		1909
214	Halbert, William	20	N. W. ¼	8	39	15	4	Lignite		1909
224	Henderson, Samuel	9		22	31	24	4	Lignite		1915
254	Heighes, George	3		29	16	21	4	Lignite		1910
271	Hollander, C. E.	5		27	10	21	4	Lignite		1910
272	Hutchison, John S.	7	L. S. 5	26	2	16	4	Lignite		1911
274	Halkirk Collieries	18	S. E. ¼	15	9	11	4	Lignite		1911
315	Halbert, David	19	N. E. ¼	30	38	15	4	Lignite		1913
			S. E. ¼	14	33	23	4	Lignite		1911

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of	
			Sec.	Tp.	Rge. of M.		Opening	Abandonment
					W.			Re-opening
329	Heaney, John	18	N. E. ¼	4	38	14	1911	1917
335	Hutchison, W. S.	13	---	14	29	20	1912	1915
345	Henry, Charles F.	7	L. S. 13	6	8	10	1912	---
354	Hand Hill Coal Co.	17	N. W. ¼	21	30	17	1912	---
366	Holmes, Joseph	7	South of Grassy Lake.	---	---	---	1912	---
373	Hedrich, William	19	S. E. ¼	20	33	23	1912	1913
380	Halliday, George W.	17	---	28	30	17	1913	---
417	Hallett, Thomas	18	N. E. ¼	26	37	14	1913	---
426	Halbert, William	19	N. E. ¼	12	33	23	1914	---
427	Hronek, Benjamin	18	L. S. 7	18	39	15	1914	---
437	Hudson, William H.	9	---	23	18	21	1915	---
472	Hildahl, Edwin	14	L. S. 7	28	31	21	1915	1917
477	Halliday, George W.	17	L. S. 3	28	30	17	1915	---
499	Hughes, Wm. R.	6	L. S. 2	4	10	17	1915	1917
638	Harrison, Stephen	3	S. W. ¼	35	8	22	1916	---
696	Hunter, John T.	17	L. S. 16	36	33	14	1917	---
697	Hamilton Coal Co., Ltd.	13	L. S. 7	18	28	19	1917	---
709	Halbert, David	19	L. S. 5, 12, 13	17	29	12	1917	---
710	Halbert, William	19	L. S. 16	14	33	23	1917	---
88	International Coal & Coke Co., Ltd.	1	---	8	8	4	1903	---
111	Irvine, Thomas	6	---	4	10	17	1906	1910
114	Independent Coal Co., Ltd., The	6	S. E. ¼	4	10	17	1906	1913
138	International Land Dev. Co.	7	---	19	10	9	1907	---
159	Imperial Coal Co.	6	---	5	10	17	1907	1910
242	Johnson, John S.	22	S. W. ¼	15	44	19	1910	1916
269	James, C. K.	18	S. E. ¼	18	39	15	1911	1913

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of		
			Sec.	Tp.	Rge. of M.		Opening	Abandonment	Re-opening
280	Jasper Park Collieries, Ltd.	31	L. S.	9	6	49	27	5	1911
312	James, C. K.	18	S. E. 1/4	28	39	16	4	1911	1913
371	Jacobson, John	7	L. S.	8	21	12	10	4	1913
407	Jaynes, Robert	5	N. E. 1/4	29	2	15	4	1913	1915
444	Jackson, Anthony	20	S. 1/2 L. S.	11	14	31	24	4	1914
462	Jeffrey, James	2	32	10	2	5	1915	1915	1915
470	Joberg, A. F.	17	N. W. 1/4	21	30	17	4	1915	1915
482	Consolidated with 470	17	N. W. 1/4	21	30	17	4	1915	1915
627	Jackson, Walter	22	N. W. 1/4	32	41	18	4	1915	1916
642	Jennings, Peter P.	5	S. 1/2 L. S.	5	22	2	7	4	1916
673	James & Strader	18	N. E. 1/4	18	39	15	4	1916	1916
679	Jackson, James	22	L. S.	11	32	41	18	4	1917
683	Jasper Park Collieries, Ltd.	31	L. S.	9	12	49	28	5	1917
686	Jackson, Alfred	7	L. S.	1	27	9	13	4	1917
691	Jackson, Alfred	7	L. S.	15	23	9	13	4	1917
53	Knee Hill Coal Co., Ltd.	21	S. W. 1/4	14	29	23	4	1915	1916
69	Keith & Fulton	25	L. S.	15	7	53	23	4	1902
103	Knowlton, G. H.	11	L. S.	14	19	29	5	5	1913
120	Kummer, William	10	S. W. 1/4	8	18	2	2	5	1906
125	Ketchum Coal Company	25	N. W. 1/4	7	53	23	23	4	1906
194	Knee Hill Coal Co., Ltd.	21	N. E. 1/4	4	31	22	4	1909	1910
219	Knowlton, G. H.	11	L. S.	13	30	29	5	5	1915
277	Kippen, Duncan	5	L. S.	8	35	2	12	4	1911
281	Knowlton, G. H.	11	L. S.	13	30	29	5	5	1913
333	Kovaice, Frank	7	S. W. 1/4	9	8	8	8	4	1916
399	Koffler, Mike	7	S. W. 1/4	13	7	9	9	4	1913
440	Kaye, Herschel	2	N. E. 1/4	11	10	2	2	5	1914

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of		
			L.	S.	W.		Opening	Abandonment	Re-opening
				Sec.	Tp.	Rge. of M.			
480	Klump, Dan	17	L. S.	6	30	17	1915	1915	
484	Krozier, John	16	N. E. ¼	7	23	14	1915	1915	
496	Kirkeby, Bert A.	17	L. S.	7	33	16	1915	1915	
633	Kent, Johnson & Whitford	28	N. E. ¼	17	56	23	1916	1916	
635	Kurp, Theo.	19	L. S.	4	38	23	1916	1916	
644	Kennis, Charles L.	5	L. S.	6	1	12	1916	1916	
126	Leitch Collieries, Ltd., The	1							
185	Long, D. H.	7	L. S.	7	14	3	1906	1915	
192	Lethbridge, City of	3	N. E. ¼	36	11	11	1909	1914	
205	Lindquist, A. A.	7	L. S.	5	22	22	1909	1913	
309	Laarz, F. W.	17	S. E. ¼	21	28	14	1911	1914	
319	Lake View Coal Co.	29	L. S.	5	29	52	1911	1916	
324	Lavanne, Jules	7	L. S.	5	22	12	1911	1911	
330	Link Coal Co., The	2	N. W. ¼	25	5	2	1911	1911	
360	Lawrence, J. L.	16	L. S.	7	25	22	1912	1917	1917
375	Lohrmann & Baxter	17	E. ½ L. S.	1	34	14	1912	1917	
400	Lavanne, Jules	27	L. S.	15	21	12	1913	1913	
419	Lakeside Coals, Ltd.	29	N. E. ¼	9	53	4	1913	1913	
423	Loiselle & Heinke	19	L. S.	5	22	22	1914	1917	
441	Linder, Karl	18	L. S.	5	18	39	1914	1915	
467	Lancaster & Willan	23	N. E. ¼	29	46	19	1915	1915	
601	Law, George	23	L. S.	9	10	48	1915	1915	
618	Lux & Harrison	22	L. S.	12	26	40	1916	1916	
676	Lethbridge Land & Coal Co.	3	L. S.	1	12	9	1916	1916	
677	Lavanne, Jules	7	L. S.	1	21	12	1917	1917	

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location		Character of coal	Date of	
			Sec.	Tp. Rge. of M.		Opening	Abandonment Re-opening
5	Martin, Robert	26	River Lot 26, Edmonton Settlement.	W.	Lignite	1897	1902
12	Martin & King	26	River Lot 26, Edmonton Settlement.		Lignite	1897	1904
15	Marsh & Neeb	26	River Lot 18, Edmonton Settlement.		Lignite	1897	1902
52	Mays Coal Co.	25	River Lot 25, Edmonton Settlement.	4	Lignite	1901	1902
60	Martin, E. D.	26		7 53 23	Lignite	1902	1904
74	Milner & Shoeman	25		7 53 23	Lignite	1903	1913
100	Martin Brothers	26		20 51 1	Lignite	1905	1905
124	Marsh, John	26		4 10 17	Lignite	1906	1910
133	Maple Leaf Coal Co., Ltd.	1		16 7 3	Bituminous	1907	1915
140	Marsh, John	6		19 7 3	Lignite	1907	1908
158	Marsh Brothers	6	S. E. ¼	4 10 17	Lignite	1907	1910
175	Marsh, John	6		29 9 17	Lignite	1908	1909
180	Mills, Jonathan J.	7		23 9 13	Lignite	1908	
266	Murphy, M. T.	7		9 12 10	Lignite	1911	1911
282	Mountain Park Coal Co., Ltd.	33		33 45 23	Bituminous	1911	
292	Morris, John	2		16 6 30	Lignite	1911	1913
308	Miskulin & Miskulin	5		10 3 11	Lignite	1911	
323	Morgan, Arthur	7		14 9 11	Lignite	1911	
331	Mitchell, A. E.	7		3 10 11	Lignite	1912	1913
367	Midland Collieries, Ltd.	13		9 29 20	Lignite	1912	
395	Molloy, Michael	3		27 10 21	Lignite	1913	
434	Marsh, Anthony	6		4 10 17	Lignite	1914	
451	Meheltz, Frank	18		11 39 16	Lignite	1914	
466	Moore, Clark	16		15 17 17	Lignite	1915	1915
478	Mason, Hugh A.	17		13 30 17	Lignite	1915	1916
489	Murray, John	7		9 10 13	Lignite	1915	1915
602	Manchenko, Taras	8		2 9 5	Lignite	1915	
604	March, Adam	22		32 41 18	Lignite	1915	

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of	
			Sec.	Tp.	Rge. of M.		Opening	Abandonment
606	Morris, John	2	N. W. ¼	26	7	Lignite	1915	1916
615	Martin, Charles F.	22	L. S. 1	28	42	Lignite	1915	1916
617	Morland Brothers	18		24	37	Lignite	1915	1917
622	Miner, Albert	22	S. W. ¼	8	43	Lignite	1915	1917
649	Moody, James	5	L. S. 16	22	2	Lignite	1916	1917
668	May, Frank	5	L. S. 3	7	2	Lignite	1916	1917
675	Murray, John N.	13	L. S. 10	28	27	Lignite	1916	1917
685	Munton, Evan	9	L. S. 4	17	15	Lignite	1917	1917
705	Manson, James	17	W. ½ L. S. 10	18	33	Lignite	1917	1917
715	Muriland, R.	2	S. W. ¼	16	5	Lignite	1917	1917
30	McPherson, A. D.	10	L. S. 13	8	20	Lignite	1899	1905
49	McPeak Coal Co.	26	112th Ave & 76th St., Edmonton.			Lignite	1906	1908
119	MacIntosh, C. G.	10		16	18	Lignite	1907	1908
149	McDevitt, J. J.	24	S. W. ¼	24	50	Lignite	1909	1911
204	McGillivray Creek Coal & Coke Co., Ltd.	1		17	8	Bituminous	1909	1913
217	McWilliams, Alex.	3		8	10	Lignite	1910	1915
222	McFarlane, William	2		27	6	Lignite	1910	1915
246	McCormack, A. D.	18	L. S. 14	34	37	Lignite	1910	1915
253	McKinnon, A. D.	2		36	5	Lignite	1911	1915
279	McKay, Daniel G.	5	L. S. 3	1	3	Lignite	1911	1915
304	McLean, Hugh D.	18	S. E. ¼	34	37	Lignite	1911	1915
315	McKinlay, Thomas S.	19	S. E. ¼	14	33	Lignite	1911	1915
334	McAlister, Robert	8		29	13	Lignite	1912	1914
343	McGuire, A. J.	3		25	8	Lignite	1912	1914
385	McGuire, James S.	19	S. E. ¼	16	33	Lignite	1913	1913
398	McCafferty, Thomas	17		18	33	Lignite	1913	1915
405	McIntyre, William H.	4	L. S. 3	24	3	Lignite	1913	1913
408	McGuire, A. J.	1		4	8	Bituminous	1913	1913

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of	
			Sec.	Tp.	Rge. of M.		Abandonment	Re-opening
415	McKenzie, H.	17	L. S. 4	5	29	14	1913	
455	McPherson, Peter	2	S. E. 1/4	3	4	28	1914	
468	McFadden & Farnell	14	L. S. 12	36	35	20	1915	
612	McLean, Charles A.	17	L. S. 2	6	30	13	1915	
664	McFaggart & Morton	18	N. E. 1/4	33	38	22	1916	
714	McDonald, William	9	E. 1/2 L. S. 4	9	15	22	1917	
57	Nash, Thomas	2		34	5	29	1902	
141	Namao Coal Co.	27		3	55	24	1907	
174	North American Collieries, Ltd.	3	L. S. 2	21	9	22	1908	
199	North American Collieries, Ltd.	2		9	6	2	1909	
203	New Barnes Coal Mine Co.	3	L. S. 9	31	9	21	1909	
215	North American Collieries, Ltd.	23	L. S. 11	14	49	18	1909	
227	North American Collieries, Ltd.	30	S. E. 1/4	30	53	7	1910	1915
233	North American Collieries, Ltd.	32		3	47	19	1910	
257	Noble, William G.	16	L. S. 6	7	23	14	1910	
267	North American Collieries, Ltd.	26	N. W. 1/4	28	53	25	1911	1915
275	National Coal Co., The	18	N. W. 1/4	3	38	14	1911	
310	North Alberta Coal Syndicate	31		29	49	26	1911	
317	Newcastle Coal Co., Ltd.	13	S. E. 1/4	9	29	20	1911	
327	Nicol & Bradshaw	19	S. W. 1/4	5	34	22	1911	
348	Neisner, John	13		23	29	20	1911	
350	Northern Construction Co.	15		27	39	10	1912	
357	Nash, Thomas	2		27	4	28	1912	
376	Nelson & Johnson	19		30	34	21	1914	
393	North Kootenay Pass Coal Co.	1		29	7	4	1913	
402	North American Collieries, Ltd.	13	Bet. Secs. 7 & 8	29	20	4	1913	
412	New Era Coal Co., Ltd.	29		14	53	4	1913	

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of	
			Sec.	Tp.	Rge. of M.		Abandonment	Re-opening
					W.		Opening	
418	Consolidated with 275 (Nat. Coal)	18				Lignite	1913	
460	Noble, W. G.	16	12	23	15	Lignite	1914	
692	Natrass, D. W.	5	L. S. 10	18	3	Lignite	1917	
37	Oliphant, Joseph H.	8	L. S. 4	5	13	Lignite	1899	
56	Oliver, Benjamin	4	L. S. 2	7	21	Lignite	1909	1914
91	Ottewell, R. P.	25	S. W. ¼	17	53	Lignite	1904	
295	Owen, J. H.	2	S. E. ¼	10	5	Lignite	1911	
648	Oliphant-Munson Collieries, Ltd.	32	N. E. ¼	23	48	Bituminous	1916	
670	Olson, Emil	17	S. W. ¼	19	29	Lignite	1916	
139	Patterson, Thomas	6	S. E. ¼	26	9	Lignite	1907	
145	Pincher Creek Coal Mining Co.	2	17	6	30	Lignite	1907	
161	Perry, James	3	2	7	22	Lignite	1907	
178	Consolidated with 397 (Mrs. Kelly)	27	S. E. ¼	8	55	Lignite	1908	
197	Consolidated with 226 (Bow Centre)	16	9	17	17	Lignite	1908	
210	Premier Coal & Coke Co., Ltd.	1	5	5	4	Bituminous	1909	
226	Prairie Coal Co., Ltd.	16	16	17	17	Lignite	1910	
261	Paulson, P. A.	1	9	7	4	Bituminous	1910	
369	Petrie, J. H.	26	28	51	25	Lignite	1912	
392	Peace River Collieries, Ltd.	31	1	60	14	Bituminous	1913	
394	Palmer Coal Co.	1	25 miles S. W. of Burmis.			Bituminous	1913	
411	Pyrsh, Samuel	4	8	8	21	Lignite	1913	
413	Page & Dayton	4	N. W. ¼	29	4	Lignite	1914	
414	Popik, Dan	26	4	48	20	Lignite	1915	
439	Premier Coal Co., Ltd.	13	L. S. 3	10	29	Lignite	1914	
607	Pieming & Reigal	22	L. S. 8	30	41	Lignite	1914	
621	Pattison, Charles H.	21	11	29	23	Lignite	1915	

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location		Character of coal	Date of		
			Sec.	Tp. Rge. of M.		Opening	Abandonment	Re-opening
626	Ployart, Athol L.	17	L. S. 1	6 29 14	Lignite	1915		
643	Peerless Coal Co.	13	S. E. ¼	7 28 19	Lignite	1916		
650	Perulzzo & Long	5	L. S. 16	6 2 26	Lignite	1916		
682	Pickering, William H.	22	L. S. 5	29 41 17	Lignite	1916	1917	
681	Parge, Charles H.	20	N. E. ¼	1 31 24	Lignite	1917	1917	
706	Phillips, Robertson & Jackson	11	L. S. 3	17 26 5	Bituminous	1917		
18	Ramsey & George	26	River Lot 23, Edmonton Settlement.		Lignite	1897	1907	
29	Radford, T. J.	26	L. S. 11	25 51 25	Lignite	1897		
39	Reliance Coal Mining Co., The	6		3 9 16	Lignite	1905	1909	
51	Ransome, M. E.	225	River Lot 42, Edmonton Settlement.		Lignite	1901	1906	
55	Rollinson, John	3	L. S. 4	18 7 21	Lignite	1902		
75	Rech, Charles	27	L. S. 4	16 55 24	Lignite	1903	1917	1917
82	Regal Collieries, Ltd.	6		8 10 16	Lignite	1907	1916	
92	Royal Collieries, Ltd.	3	S. E. ¼	31 9 21	Lignite	1904	1913	
128	Rosedale Coal Co.	26	River Lot 23, Edmonton Settlement.		Lignite	1907	1909	
147	Ritchie Coal Co., Ltd.	26	Fraser Flats, Edmonton.		Lignite	1907	1911	
154	Raisbeck, Luke	7		9 10 13	Lignite	1907		
156	Rupert's Land Coal Co.	25		11 54 24	Lignite	1907		
165	Redcliff Brick & Coal Co., Ltd.	8	L. S. 14	5 13 6	Lignite	1908		
169	Russell, John	11		13 26 5	Bituminous	1908		
170	Rock Springs Coal & Brick Co., Ltd.	6	L. S. 14	3 10 17	Lignite	1908	1915	
172	Reynolds, H. I.	6		4 10 17	Lignite	1908		
182	Raymond Coal Co.	25		27 53 23	Lignite	1908	1909	
221	Riviere Qui Barre Coal Co.	28	S. E. ¼	30 55 26	Lignite	1910	1913	
228	Regal Collieries, Ltd.	6	L. S. 8	19 10 16	Lignite	1910	1914	1915
250	Round Hill Collieries, Ltd.	23	S. E. ¼	30 48 18	Lignite	1910		
299	Richardson & Hagenbuch	13	S. W. ¼	29 26 21	Lignite	1911		

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location		Character of coal	Date of	
			Sec.	Tp.		Opening	Re-opening
301	Robinson, U. G.	14	Neaf Big Valley.		Lignite	1911	1914
320	Rider Bros.	18	N. W. ¼	31	Lignite	1911	1913
325	Russian Coal Co., The	18	L. S. 8	4	Lignite	1911	1914
332	Redcliff Clay Products Co., Ltd.	8	N. W. ¼	9	Shale	1912	1914
344	Raber, Elsworth	7	L. S. 13	22	Lignite	1912	1914
346	Rosedale Coal & Clay Products Co., Ltd.	13	L. S. 14	28	Lignite	1912	
347	Rose Deer Coal Mining Co., Ltd.	13	L. S. 13	7	Lignite	1912	
353	Roberts, William	7		36	Lignite	1912	1916
363	Rathburn, L. F.	10		8	Lignite	1912	1913
379	Redcliff Pressed Brick Co., Ltd.	8	L. S. 5	9	Shale	1913	1914
406	Consolidated with 433	10		13	Lignite	1913	
431	Rambo, M. C.	30	N. W. ¼	2	Lignite	1914	1914
446	Ruffell, Alfred	3	S. E. ¼	31	Lignite	1914	1914
450	Robinson, William	22	L. S. 8	32	Lignite	1914	1915
465	Raisbeck, Luke	7	L. S. ¼	3	Lignite	1915	1917
469	Ross, R. A.	14	L. S. 9	34	Lignite	1915	1917
479	Royal, Edward	17	S. W. ¼	12	Lignite	1915	1915
493	Consolidated with 325 (E. Wimmer)	18		41	Lignite	1915	
608	Richmond, Andrew	18	L. S. 15	10	Lignite	1915	1916
653	Ray, George Alex.	34	S. E. ¼	25	Lignite	1916	1917
671	Reed, Archer M.	21	S. W. ¼	28	Lignite	1916	1917
698	Rex Coal Co.	6	L. S. 2	4	Lignite	1917	
711	Rex Coal Co.	6	L. S. 8	4	Lignite	1917	
716	Rowe, W. N.	2	L. S. 9	27	Lignite	1917	
718	Rataushk, Fred	8	N. E. ¼	28	Lignite	1917	
28	Stewart & Campbell	27	N. E. ¼	8	Lignite	1897	1913
47	Strathcona Coal Co.	26	River Lot 9, Edmonton Settlement.	55	Lignite	1905	1911

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of		
			Sec.	Tp.	Rge. of M.		Opening	Abandonment	Re-opening
61	Scott, Fred	8	S. E. ¼	6	13	Lignite	1906	1911	
101	Sturgeon Consolidated Collieries, Ltd.	27	N. W. ¼	9	55	Lignite	1905	1911	
110	Sutherland, Murdock	27		4	55	Lignite	1906	1911	
135	Smith, T. Edwin	9	L. S. 2	36	14	Lignite	1906	1917	
144	Scott & MacLaine	2		20	5	Lignite	1907	1914	
157	Southern Alberta Coal Co., Ltd., The	6	S. E. ¼	8	10	Lignite	1907	1911	
163	Shirts, James E.	6	S. E. ¼	30	10	Lignite	1908	1911	
183	Rushton, F. L., Consolidated with 244	23				Lignite	1909	1913	
195	Standard Lethbridge Collieries, Ltd.	3	S. E. ¼	28	9	Lignite	1909	1911	
196	Speers, H.	27	N. E. ¼	8	55	Lignite	1909	1914	
202	Superior Coal Co., Ltd., The	6	N. W. ¼	18	10	Lignite	1909	1913	
238	Simpson, M.	7		36	11	Lignite	1910	1913	
255	Straub, F. A.	19	S. W. ¼	7	38	Lignite	1910	1916	1917
239	Savage, George W.	7	L. S. 10	35	12	Lignite	1910	1917	
241	Spicer Coal Co., Ltd., The	23	S. W. ¼	18	48	Lignite	1910		
244	Stony Creek Collieries, Ltd.	23	L. S. 1	33	46	Lignite	1910		
249	Schares, J. M.	22	L. S. 9	16	42	Lignite	1910	1916	
250	Sinclair, A. C.	17		21	28	Lignite	1910	1911	
262	Smith, John H.	17	L. S. 2	19	29	Lignite	1910		
263	Security Coal Mines Co., Ltd.	29	N. E. ¼	14	53	Lignite	1911	1913	
264	Stavely Coal Mining Co.	9	N. E. ¼	29	14	Lignite	1911	1911	
265	Simanton, W. H.	7	S. E. ¼	22	12	Lignite	1911	1916	
268	Strader & Green	18	S. E. ¼	18	39	Lignite	1911	1916	
276	Slockett, George	3	L. S. 13	9	10	Lignite	1911	1915	1916
286	Square Deal Mercantile Co.	14	S. W. ¼	26	35	Lignite	1911	1913	
307	Sanderson, William John	9	N. W. ¼	8	15	Lignite	1911	1913	
311	Seale, James	5		22	1	Lignite	1911	1913	
341	Santoni, Louis	7	L. S. 9	5	8	Lignite	1912		

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of		
			Sec.	Tp.	Rge. of M.		Opening	Abandonment	Re-opening
131	Taber Coal Co.	6	L. S. 9	4	17	Lignite	1907		
225	Thomas, John	3	L. S. 13	9	21	Lignite	1910	1911	
252	Tofield Coal Co., Ltd.	24	N. ½	26	19	Lignite	1910		
313	Tonge & Grotton	2	L. S. 1	16	30	Lignite	1911	1911	
322	Trochu Coal Co., The	19	S. E. ¼	34	23	Lignite	1911	1913	
382	Thorpe, George W.	7	L. S. 4	16	9	Lignite	1913	1914	
449	Truney, Mrs. James R.	22	L. S. 15	36	16	Lignite	1914		
495	Thompson, Ole	19	L. S. 16	12	22	Lignite	1915		
616	Tate, John	22	S. E. ¼	18	17	Lignite	1915	1916	
637	Trentham, William T.	20	L. S. 15	22	31	Lignite	1916		
652	Taft, John B.	34	N. E. ¼	35	7	Lignite	1916	1916	
488	Unsworth, Robert	17	L. S. 14	6	33	Lignite	1915		
64	West Canadian Collieries, Ltd.	1		8	3	Bituminous	1902	1913	
77	Welsh, William	2	26	7	2	Lignite	1903	1913	
87	West Canadian Collieries, Ltd.	1	L. S. 10	20	7	Bituminous	1903		
102	Wilson, John	26	West of Leduc.			Lignite	1904	1905	
116	Watson, George	20	L. S. 13	22	24	Lignite	1906	1915	
122	Wetaskiwin Coal Co.	26		20	25	Lignite	1906	1915	
142	Watson, George	20		22	31	Lignite	1907	1915	
148	Western Coals, Ltd.	26	River Lot 31, Edmonton Settlement.			Lignite	1907	1915	
179	Weaver, Edward	5	L. S. 2	6	2	Lignite	1908		
186	Walwork, James	7	L. S. 5 & 6	16	29	Lignite	1909	1912	
187	Watson & Pattison	21	S. W. ¼	36	11	Lignite	1909	1917	
193	West Canadian Collieries, Ltd.	1	S. E. ¼	35	7	Bituminous	1909		
198	Watkins, Watkin E.	9		4	16	Lignite	1909		
243	Washkoski, Michael S.	18	S. E. ¼	26	37	Lignite	1910		

LIST OF MINES—Continued.

Mine No.	Operator	No. of District	Location			Character of coal	Date of	
			N. E. ¼	Sec.	Tp. Rge. of M.		Abandonment	Re-opening
251	Wilkinson, Julius	22	N. E. ¼	28	42 17	Lignite	1910	
291	Wagner, Joseph	18	S. W. ¼	28	39 16	Lignite	1911	1916
303	Watson, George	20	L. S. 11	22	31 24	Lignite	1911	
314	Walsh, William R.	19	S. E. ¼	29	38 23	Lignite	1911	
361	Woolings, Joseph	10	N. W. ¼	7	22 3	Lignite	1912	
396	West Canadian Collieries, Ltd.	1		2	8 4	Bituminous	1913	
409	Wall, J. H.	4	L. S. 4	17	7 21	Lignite	1913	1917
428	Wilcox, Fiss & Co.	27	N. E. ¼	8	55 24	Lignite	1914	
430	Weaver, Hugh	22		18	44 19	Lignite	1914	1915
442	Williscroft, W. & G.	27	S. E. ¼	3	55 24	Lignite	1914	
445	Wilson, Charles S.	20	L. S. 6	14	41 24	Lignite	1914	
471	Wooden, Clyde M.	14	N. E. ¼	18	34 21	Lignite	1914	
497	Wadsworth, Samuel	17	L. S. 1	19	29 14	Lignite	1915	
613	Warnoth, Clifford	22	L. S. 7 & 8	30	14 17	Lignite	1915	
624	Williams, C.	10		4	22 3	Lignite	1915	1916
630	Washkoski, M. S., Consolidated with 243	--						
640	Western Commercial Co., Ltd.	13	S. E. ¼	7	28 19	Lignite	1916	
654	Waldo, Walter H.	34	L. S. 14	24	70 11	Lignite	1916	1917
678	Western Gem Mining Co., Ltd.	13	L. S. 13	10	29 20	Lignite	1917	
682	Wedman, Gottaleb	26	L. S. 4	6	51 25	Lignite	1917	
220	Yellowhead Coal Co.	32		6	49 21	Bituminous	1910	1916
328	Yard Brothers Coal Co.	19	S. W. ¼	13	34 22	Lignite	1911	
337	Yard, George C.	19	S. W. ¼	10	34 22	Lignite	1911	1916
661	Yard Brothers Coal Co.	19	L. S. 4	10	34 22	Lignite	1916	
646	Young, Charles H.	17	L. S. 1	1	34 14	Lignite	1916	1917
383	Caswell, F. T., Consolidated with 403	--						
403	Zarth & Embury	13	L. S. 7	22	29 20	Lignite	1913	1916
611	Zehner, J. L.	17	S. W. ¼	29	32 13	Lignite	1915	

BOARD OF EXAMINERS.

The constitution of this Board during the year 1917 was as follows:

As representing:

- (a) The Mine Inspectorate:
John T. Stirling, Chief Inspector of Mines.
- (b) Managers:
Messrs. Robert Livingstone and William P. Williams.
- (c) Miners:
Messrs. Evan Morgan and Andrew Goodwin.

Examinations were held during the year as follows:

For First and Second Class Certificates on May 16th, 17th and 18th, 1917, at Blairmore, Lethbridge, Calgary, Edmonton, Nordegg and Mountain Park.

For Third Class Certificates on April 17th at Evansburg; April 18th at Brule Lake; April 19th at Pocahontas; April 21st at Mountain Park; April 23rd at Coalspur; April 25th at Edmonton; May 1st at Drumheller; May 3rd at Canmore; May 7th at Taber; May 8th at Lethbridge; May 10th at Blairmore; May 11th at Bellevue, and May 21st at Nordegg.

For Mine Surveyors' Certificates on May 19th at Blairmore, Lethbridge, Calgary, Edmonton, Nordegg and Mountain Park.

Twenty-two candidates presented themselves for examination for First Class Certificates, of whom nine were successful; thirty-one for Second Class certificates, of whom fourteen were successful; sixty-two for Third Class certificates, of whom fifty were successful, and five for Mine Surveyors' Certificates, of whom three were successful.

Owing to the trouble being experienced in obtaining a sufficient number of certificated officials, examinations for Third Class Certificates were held throughout the Province at different times of the year.

Several applicants were refused authority to present themselves at the examinations, as they had not undergone training in Mine Rescue Work as required by the examination rules.

During the year 192 Provisional Certificates were issued authorizing the holders of these certificates to act as overmen until they had an opportunity of obtaining certificates by examination. No Third Class Provisional Certificates have been issued during the year.

List of Names of Holders of First Class Certificates issued by the
Government of the Province of Alberta during 1917.

NAME	ADDRESS	CERT. NO.	DATE ISSUED
Brownrigg, John D. -----	Bankhead -----	21	17-7-17
Blake, Henry -----	Bellevue -----	25	27-7-17
Donaldson, Christopher S. ---	Lethbridge -----	20	17-7-17
Davies, Thomas Owen -----	Entrance -----	22	17-7-17
Ferguson, Cornelius J. -----	Mountain Park -----	23	17-7-17
Higgins, Alexander -----	Calgary -----	19	7-7-17
McDonald, Hector S. -----	Bellevue -----	17	7-7-17
McLeod, John A. -----	Bankhead -----	18	7-7-17
Pavier, Evan L. -----	Drumheller -----	24	24-7-17

List of Names of Holders of Second Class Certificates issued by the
Government of the Province of Alberta during 1917.

NAME	ADDRESS	CERT. NO.	DATE ISSUED
Atherton, Edward -----	Mountain Park -----	49	17-7-17
Ashurst, William -----	Coleman -----	51	17-7-17
Barclay, William -----	Rowley -----	54	10-8-17
Brown, Thomas -----	Mountain Park -----	55	17-11-17
Cox, John Charles -----	Coleman -----	42	7-7-17
Clarke, Robert -----	Hardieville -----	43	7-7-17
Crabb, Samuel A. B. -----	Lethbridge -----	52	17-7-17
Hutton, David T. -----	Bellevue -----	44	10-7-17
Lundy, James -----	Drumheller -----	53	17-7-17
McDonald, John H. -----	Edmonton -----	48	10-7-17
Nicol, George -----	Pocahontas -----	46	10-7-17
Puckett, Owen L. -----	Drumheller -----	50	17-7-17
Simpson, William G. -----	Drumheller -----	45	10-7-17
Stevenson, John -----	Lethbridge -----	47	10-7-17

List of Names of Holders of Third Class Certificates issued by the
Government of the Province of Alberta during 1917.

NAME	ADDRESS	CERT. NO.	DATE ISSUED
Anderson, Hugh W. -----	Edmonton -----	150	7-7-17
Ashman, Alfred W. -----	Rosedale -----	151	7-7-17
Armstrong, John -----	Nordegg -----	171	17-7-17
Badham, Thomas -----	Coleman -----	153	7-7-17
Beveridge, A. -----	Commerce -----	156	7-7-17
Brown, David M. -----	Commerce -----	157	7-7-17
Brooks, Burton T. -----	Drumheller -----	167	17-7-17
Bartlett, Wallace -----	Elcan -----	173	17-7-17
Bennett, Isaac -----	Armada -----	179	17-7-17
Blair, John -----	Edmonton -----	183	25-7-17
Cooper, John A. -----	Lethbridge -----	166	10-7-17
Coutts, A. B. -----	Hardieville -----	178	17-7-17
Campbell, Henry -----	Bellevue -----	188	13-8-17
David, William -----	Coalspur -----	192	7-11-17
Evans, Llewellyn -----	Coleman -----	152	7-7-17
Excoffon, Eugene -----	Bellevue -----	155	7-7-17
Foster, James -----	Lethbridge -----	174	17-7-17
Fisher, William J. -----	Bellevue -----	186	13-7-17
Greenhalgh, R. M. -----	Coleman -----	154	7-7-17
Givens, John -----	Bankhead -----	158	10-7-17
Goodrick, William L. -----	Commerce -----	168	17-7-17
Goodwin, Andrew -----	Bellevue -----	187	13-8-17
Hunter, John T. -----	Garden Plain -----	148	7-7-17
Holland, Thomas -----	Lethbridge -----	161	10-7-17
Hastings, Andrew P. -----	Lethbridge -----	176	10-7-17
Jones, Evan J. -----	Calgary -----	144	3-7-17
Jinks, William E. -----	Beverly -----	180	25-7-17
Kelly, Patrick -----	Edmonton -----	147	7-7-17
Kerrison, Thos. W. -----	Eyremore -----	163	10-7-17
Koentges, John -----	Blairmore -----	182	25-7-17
Kyle, Daniel C. -----	Hillcrest -----	185	25-7-17
Longworth, Thos. -----	Lethbridge -----	146	5-7-17
Logan, John T. -----	Drumheller -----	190	6-9-17
Litherland, Elias -----	Drumheller -----	193	24-11-17
Mitchell, John -----	Evansburg -----	143	27-2-17
Morgan, Robert M. -----	Coleman -----	160	10-7-17
Morse, Alfred T. -----	Drumheller -----	172	17-7-17
Michayluck, John G. -----	Frank -----	184	25-7-17
McMillan, Daniel -----	Drumheller -----	149	7-7-17
McDonald, John H. -----	Edmonton -----	164	10-7-17
McKinnon, John L. -----	Coleman -----	189	4-9-17
Padgett, Albert -----	Bellevue -----	177	17-7-17
Randall, David -----	Coleman -----	191	10-10-17
Strickland, William -----	Evansburg -----	145	5-7-17
Stratton, James M. -----	Taber -----	181	25-7-17

NAME	ADDRESS	CERT. NO.	DATE ISSUED
Tennant, John -----	Lethbridge -----	165	10-7-17
Terris, Andrew -----	Nordegg -----	170	17-7-17
Vaselenak, Michael -----	Lethbridge -----	159	10-7-17
Willetts, F. -----	Lethbridge -----	162	10-7-17
Wilson, A. -----	Drumheller -----	169	17-7-17
Wolstoncroft, Robert -----	Commerce -----	175	17-7-17

WAGES.

The scale of wages paid in the Province at the end of the year 1917 shows increases over the wages paid in previous years.

The general wage schedule now being paid is as follows:

OUTSIDE WAGES.		Per day	of	Hours
Bottom man	-----	\$3.66	"	9
Slate pickers (boys)	-----	1.76	"	9
Slate pickers (men)	-----	3.16	"	9
Car oilers (men)	-----	3.16	"	9
Car oilers (boys)	-----	2.13	"	9
Tally boys	-----	1.76	"	9
Teamsters	-----	3.66	"	9
Blacksmiths	-----	4.72	"	9
Blacksmiths' helpers	-----	3.67	"	9
Carpenters	-----	4.72	"	9
Carpenters' helpers	-----	3.67	"	9
Power house engineers	-----	5.35	"	11
Power house engineers	-----	4.77	"	9
Power house engineers	-----	4.19	"	8
Fan men	-----	3.67	"	11
Hoisting engineers	-----	3.97	"	8
Hoisting engineers	-----	4.63	"	9
Hoisting engineers	-----	5.35	"	11
Incline engineers	-----	4.19	"	9
Tail rope engineers	-----	4.46	"	8
Tail rope engineers	-----	4.72	"	9
Endless rope engineers	-----	4.08	"	9
Box car loader engineer	-----	4.19	"	9
Tipple engineer	-----	4.19	"	9
Screen engine tender	-----	3.34	"	9
Locomotive engineer	-----	4.19	"	9
Locomotive switchman	-----	3.78	"	9
Fireman	-----	3.66	"	8
Fireman	-----	4.16	"	9
Fireman	-----	4.72	"	11
Fireman's helper	-----	3.34	"	9
Water tender	-----	4.02	"	11
Railway car handler	-----	3.28	"	9
Tipple dumper (man)	-----	3.66	"	9
Tipple dumpers' helpers	-----	3.33	"	9
Tipple dumper (boy)	-----	2.13	"	9
Top cagers	-----	3.33	"	9
Car repairer	-----	4.19	"	9
Car repairer's helper	-----	3.67	"	9
Breaker engineer	-----	4.19	"	9
Lampman (depending upon number of lamps and skill of man)	----- \$3.16 to	3.66	"	8
Lampman (depending upon number of lamps and skill of man)	----- \$3.16 to	4.19	"	11
Machinists	----- \$4.19 to	4.72	"	9
Machinist's helper	-----	3.67	"	9
Ashman	-----	3.16	"	9
Ashman	-----	3.66	"	11
Wiper (man)	-----	3.66	"	11
Coupler (man)	-----	3.16	"	9
Coupler (boy)	-----	2.13	"	9
Breaker oiler	-----	3.66	"	10
Washer or tipple oiler	-----	3.66	"	10
Breaker picker boss	-----	3.66	"	9
Timber framer	-----	4.19	"	9
Timber sawyer	-----	3.33	"	9
Box car shoveller	-----	3.66	"	9
Breaker platform boss	-----	3.66	"	9
Breaker platform men	-----	3.28	"	9
Breaker screen men	-----	3.16	"	9
Rock Bank men	-----	3.16	"	9

	Per day	of	Hours
Dirt bank men -----	3.16	"	9
Fan fireman -----	4.19	"	11
Stable men -----	3.16	"	9
Finisher after box car loader -----	3.16	"	9
All other labor not classified -----	3.16	"	9

BEE HIVE COKE OVENS.

Levelling and drawing (6½-ton charge per oven) --	\$1.50		
Levelling and drawing (5-ton charge per oven) --	1.05		
Loading into box or open cars (over 20 tons per month) per ton -----	.23		
Loading into box or open cars (less than 200 tons per month) per ton -----	.21		
Steam locomotive engineer -----	4.19	"	9
Motorman -----	3.93	"	9
Larryman -----	3.16	"	9
Plasterers -----	3.16	"	9
Carters and cleaners -----	3.16	"	9
All other labor -----	3.16	"	9

BELGIAN COKE OVENS.

Ram engine man -----	4.19	"	9
Chargers -----	3.66	"	9
Clayers -----	3.66	"	9
Drawers -----	3.66	"	9
Loaders -----	3.28	"	9

BRIQUETTE PLANT.

Engineer -----	4.73	"	11
Briquetter -----	4.86	"	11
Briquetter's helper -----	4.19	"	11
Tar melter -----	3.66	"	11
Laborers -----	3.66	"	11

INSIDE WAGES.

Shot lighter -----	4.08	"	8
Bratticeman -----	4.08	"	8
Bratticeman's helper -----	3.47	"	8
Timberman -----	4.08	"	8
Timberman's helper -----	3.47	"	8
Tracklayers -----	4.08	"	8
Tracklayer's helper -----	3.47	"	8
Motorman -----	3.79	"	8
Motorman's helper -----	3.47	"	8
Locomotive engineer -----	3.79	"	8
Locomotive switchman -----	3.47	"	8
Drivers -----	3.79	"	8
Drivers (wet places) -----	4.08	"	8
Drivers (spike team) -----	4.31	"	8
Couplers (men) -----	3.47	"	8
Couplers (boys) -----	2.13	"	8
Switch boys -----	\$1.76 to 2.13	"	8
Door boys -----	1.42	"	8
Fan boys -----	\$1.42 to 2.13	"	8
Rope riders -----	3.79	"	8
Main and tail rope riders -----	4.08	"	8
Pushers -----	3.47	"	8
Buckers -----	3.47	"	8
Loaders -----	3.47	"	8
Miners -----	4.08	"	8
Miners (wet places) -----	4.60	"	8
Miner's laborer (wet places) -----	3.88	"	8
Rock miners -----	4.60	"	8
Timber handlers -----	3.79	"	8
Cagers, slope and incline -----	3.47	"	8
Cagers, shaft -----	4.08	"	8
Machinemen -----	4.60	"	8

	Per day	of	Hours
Machinemen's helper -----	\$4.08	"	8
Pumpmen -----	3.47	"	8
Pumpmen (Galt mines) -----	3.97	"	8
Holstmen -----	\$3.79 to	4.08	" 8
Drivers (boys) -----	\$2.13 to	3.47	" 8
Grippers -----	3.47	"	8
Grippers (boys) -----	\$2.13 to	3.47	" 8
Pipe fitter's helpers -----	3.47	"	8
Pick carriers -----	\$1.76 to	3.47	" 8
Clutchmen -----	4.08	"	8
Rollermen -----	3.47	"	8
All other labor not classified -----	3.47	"	8

NOTE: From August 1st, 1917, an amount of 20 cents per day in addition to the above rates was paid to all employees and from December 1st, 1917, a further additional sum of 14 cents per day was paid to each employee.

The following statement gives particulars regarding receipts and expenditures during the year 1917:

	Receipts	Expenditure
Salaries and expenses of Inspectors -----		\$19,235.39
Grant to Rocky Mountain Branch Canadian Mining Institute -----		250.00
Expenses of examinations, printing and stationery -----		1,638.96
Maintenance of Mine Rescue Stations and Cars -----		11,191.54
Miscellaneous -----		1,488.60
Examination and provisional certificate fees -----	\$ 2,163.00	
Coal Leases under Road Allowances -----	270.00	
Royalties on coal mined under road allowances -----	6,533.61	
Sales of Mines Act -----	97.65	
Reimbursement account of Mine Rescue Stations -----	5,726.68	
Miscellaneous -----	78.25	
Total -----	\$14,869.19	\$33,804.49

Your obedient servant,

JOHN T. STIRLING,

Chief Inspector of Mines

ARCHITECTURAL BRANCH

Edmonton, February 19, 1918.

L. C. CHARLESWORTH, Esq.,
Deputy Minister of Public Works,
Edmonton, Alta.

Sir:

I have the honour to report on the work carried out by the Architectural and Building Construction Branch during the year 1917.

During the period from the first of March to the first of December I was absent on leave; in my absence the work of the branch was carried on by Mr. J. B. Allan, as Acting Provincial Architect.

During the year practically no new construction was undertaken, the work done consisting principally of repairs and alterations to existing buildings. Building construction has now to be carried on under very great difficulties, owing to the uncertain supply of both labour and material and, also, the greatly increased cost of both. Therefore, no work was undertaken other than that which was absolutely necessary. The work performed in detail was as follows:

PARLIAMENT BUILDINGS.—Several minor alterations were carried out in these buildings with a view to increasing and improving the accommodation. Work was carried on in the grounds, consisting principally of the planting of trees and shrubbery. The construction of a greenhouse was commenced with a view to providing facilities for the raising of plants and flowers required for the grounds and buildings.

GOVERNMENT HOUSE.—Work at this point consisted principally of the improvement of the grounds, planting of trees and shrubbery and the construction of a fountain and basin.

INSTITUTE OF TECHNOLOGY.—Plans and specifications were prepared and tenders called for on the erection of Engineering shops in connection with this Institute. The contract was awarded to the lowest bidder. The building was well on towards completion at the end of the year.

This Institution was turned over to the Military Hospitals Commission, Vocational Branch, on the first of December, but this Department will continue to exercise supervision of the buildings and provide the necessary service for maintenance and repairs on same, the cost of which service will be charged to the Military Hospitals Commission.

PUBLIC BUILDING, TABER.—Plans and specifications were prepared for the erection of this building; tenders were called for and were received early in December. It was then decided to modify the

plans with a view to increasing the accommodation. All tenders were, therefore, rejected, and new drawings prepared.

STETTLER COURT HOUSE.—Drawings and specifications were prepared for a Steam Heating installation for this building to replace the unsatisfactory Hot Air system. Tenders were received and contract awarded to the lowest bidder.

PROVINCIAL ASYLUM.—Drawings were prepared for the installation of a Hot Water Circulating System at this Institution, to meet the steadily increasing demand for large supplies of hot water, as required for treatment purposes. Great difficulty has been experienced in obtaining many of the fittings necessary for this work. Progress is now, however, being made and the installation should be completed in the very near future.

RED DEER INSTITUTION.—Drawings were prepared for the alterations of this building to adapt it for use as a home for mentally deranged soldiers. Work was commenced towards the end of the year. Satisfactory progress has been made and the work is now practically complete.

In connection with this building it has been necessary to provide a new water supply and sewerage system, work on which cannot be completed until spring weather allows outside work to proceed.

GENERAL MAINTENANCE.—General maintenance of all provincial buildings has been carried on under the care of this branch, and the whole of these buildings have been kept in a first class condition.

SCHOOL PLANNING.—The work of supervision and the approval of school plans undertaken by this office for the Department of Education, has this year greatly increased. Plans representing an approximate value of \$200,000.00 in school buildings have been reported upon during the past year, and close scrutiny and correction of all building specifications and contracts submitted have been effected.

General advice on questions on construction, also estimates of cost and the assistance of this office in economic planning have been available for the use of trustees and others, and in this connection much correspondence, together with preparation of a considerable number of explanatory sketches and drawings, was necessary.

Visits of inspection to school buildings nearly completed have been made from time to time at the discretion of the Department, or as in some cases where doubt existed as to the responsibility of the contractor. Inspection of a few existing buildings where repairs or extension was contemplated, has been undertaken in an advisory capacity. On occasions where difficulty in financing to completion buildings already under construction has arisen, revised and modified sets of working drawings have been drawn up by this office.

Several standard plans supplementary to those previously on issue by the Department of Education have been prepared for the use of school districts in general.

Prior to the preparation of working plans for the larger school buildings, or for alterations and additions to existing school buildings, collaboration with the architect employed by the school board has in most cases been effected. Preliminary plans have been ad-

vised upon, or suggestions for sketches made and exchanged in an endeavor to induce school planning along the most approved methods, in providing the school accommodation desired by the educational authorities and to obtain conformity to the building regulations of that Department .

An early reference to this Department and the submission of tentative schemes is particularly to be advocated as in this manner it has been found possible to eliminate the delay and often unsatisfactory results that would be occasioned by the amendment of completed plans.

The question of Consolidated Schools is also under consideration, but in order to get the results that would afford the maximum facilities for advanced school accommodation, increased attention should be afforded this subject. More particularly is this desirable in view of the present time of enforced economy in cost of construction, along with advanced price of building materials.

In view of the increased need of teachers' homes of small cost, it has been decided to issue plans and specifications of suitable types, and this matter will receive early attention in the new year.

HOSPITAL PLANNING.—Under the Municipal Hospitals Act the Government is obliged to prepare plans and specifications for certain types of rural hospitals.

During my absence sketch plans were prepared and one scheme prepared complete with working drawings and specifications, but it would appear that no sufficient data have been available for the purpose of preparing a really satisfactory scheme. With a view to having this matter dealt with as it deserves, I have arranged to meet the officials of the Board of Health to discuss the matter with them, and I hope in this way to secure the necessary data so that a really satisfactory scheme or schemes can be prepared.

Your obedient servant,

RICHARD P. BLAKEY,

Provincial Architect.

THE STEAM BOILERS BRANCH

Edmonton, January 18, 1918.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:

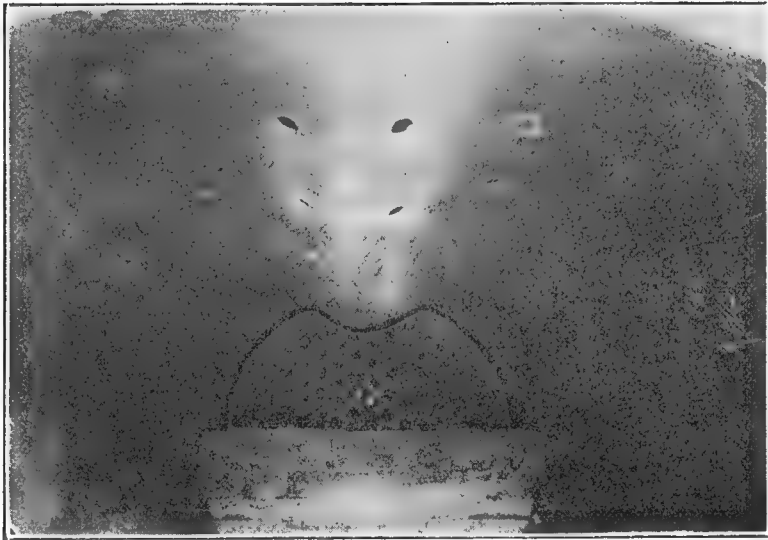
I have the honour to submit to you herewith, in compliance with Section 8 of The Boilers Act, the following report of the Steam Boiler Branch for the year ending December 31st, 1917.

I am much pleased to again be able to report that no loss of life or serious personal injury has occurred to any one due to the explosion of a boiler, or failure of a boiler accessory operating under the provisions of the Act in this province, during the past year.

Several boiler failures, however, have occurred in various parts of the province, due to low water, neglect in washing out, etc. Three of these were of a serious nature though no one was personally injured thereby, and as these accidents are noteworthy I will submit the following brief account of them for your perusal:

Collapse of Cylindrical Furnace.

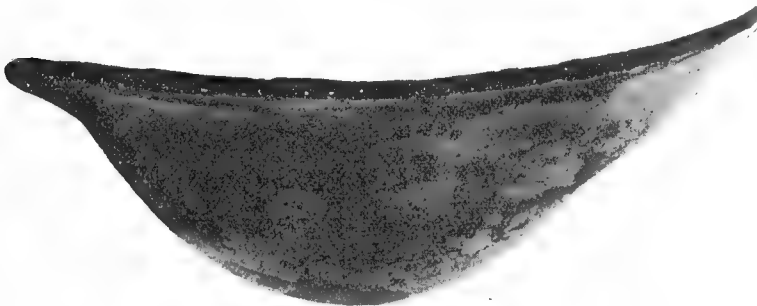
This accident occurred in April last at the plant of the Pacific Coal Company, Lovett, where several Robb Brady boilers were operating in battery at 120 pounds working pressure. We were advised that the boilers were being forced beyond their normal capacity at the time the accident occurred. This type of boiler is, under these conditions, particularly subject to "priming" owing to its design, which action causes the water level to drop rapidly unless very carefully maintained. Evidently, owing to low water, the furnace crown was uncovered long enough to overheat sufficiently to collapse. Thirty-two radial stays were quickly drawn out of the plate, allowing the same to be forced down 5 inches in the form of a long rib for a distance of 58 inches in length and about 20 inches in width. Fortunately the pressure was then quickly reduced by being relieved through the staybolt holes, thereby preventing a serious explosion. Extensive repairs are required before the boiler can again be utilized for service. An illustration of the collapsed furnace is shown below.



Overheated Furnace Top, Pacific Pass Collieries Boiler.

Distension in Firesheet of Horizontal Tubular Boiler.

A 60 inches by 14 feet horizontal tubular boiler was badly damaged by over-heating at the Ardley Collieries, Ardley. The exceptionally high grade quality of the steel alone prevented a bad explosion at this plant. Our records show the boiler to be practically new, also that it was rated at 135 pounds working pressure. Reports from Inspector Douglas and the engineer in charge attribute the failure to a heavy deposit of clay and mud on the firesheet, the feed water being taken from the mine.



Bagged Section of Firesheet removed from Ardley Collieries Boiler, Outside View

Several days before the accident one of the rooms in the mine caved in, making the water very muddy, and consequently the engineer protested against having to use it when comparatively clear water could be pumped from the river nearby. The owner, wishing to economize, insisted on the mine supply being utilized, which resulted several days afterwards in the firesheet being bagged at the centre of the plate throughout an area of 22 inches x 19 inches and about 10 inches in depth. The sheet, originally 7-16 inch thick, was



Bagged Section of Firesheet removed from Ardley Collieries Boiler, Inside View.

stretched to 1-16 inch along the lower portion of the bag without the slightest evidence of cracking or perforation, showing unusual ductility, and thus saving the boiler from a disastrous rupture. Engineer Mould, who was in charge, has been penalized by having his certificate suspended for a period of six months, for operating a boiler when in an unsafe condition.

Explosion of Hot Water Heating Boiler.

A 36 inches by 42 inches sectional cast iron round boiler exploded in the basement of the Immigration Hall, Calgary, on January the 6th. This boiler was one of a pair which was used for heating the building and did not come under the supervision of the Department, being exempted from the provisions of the Act. On examination, it was found that the 4-inch stop valve on main delivery pipe had been closed, thereby isolating the boiler completely, and as it was not equipped with a safety valve the pressure accumulated until relieved by the three upper sections being blown to pieces. The 4-inch stop valve and pipe connections were also torn from the boiler. No personal injury resulted from the explosion, but the basement of the building was wrecked.

Several other boiler failures occurred during the year, due principally to neglect in washing out or to low water. These are reported on the office files but, not being of a serious nature, I will omit explaining them in detail.

Steam Pipe Failure.

An 8-inch steam pipe, which connected a 1,000 Horse Power triple expansion Bellis & Morcam engine to a 12-inch main header, carrying super-heated steam at 165 pounds pressure, was torn out of its flanged connections, about 9 p.m. on September the 10th, in consequence of which the plant of the Alliance Power Company at Edmonton was closed down for several hours. This pipe was formed to a 36-inch radius bend and the shortness and stiffness of the bend evidently did not allow for the movement of the engine. We found later that it had not been screwed into the flange the full depth to permit of its being permanently secured. Consequently the threads

in the flange had gradually worn down by movement of the engine until it became too weak to withstand the pressure. The accident stopped the operation of the street railway and put the city in darkness for several hours. I am pleased to report that all the men in the plant escaped injury, although four of them were in the engine room at the time of the accident.

Five steam tractor Engineers have had their Certificates suspended during the year for negligently operating tractor boilers. In three of the cases the boiler fire-box was either mud burned or the crown sheet overheated.

One First Class Engineer's Certificate was cancelled on account of the holder thereof failing to take usual and ordinary precaution when erecting a 500 H. P. Water Tube Boiler to provide blocking or other support beneath the boiler, which consequently buckled the suspension column and injured three men who were assisting in the installation of the boiler.

Three fatal accidents have been reported during the past threshing season in connection with the operation of steam tractors. In one instance the operator, after making adjustments to the friction clutch in the engine fly-wheel while the tractor was on a steep grade, jumped from the side platform when the engine began to back down the hill. His overalls, however, caught on one of the mudhooks and he was thrown beneath the large road wheel which passed over his body. The second case reported was caused by the Fireman of a steam tractor stepping into the traction gear wheels while the tractor was in motion. We understand that the deceased was under the influence of liquor at the time the accident occurred. He was so badly injured that death ensued shortly afterwards. A third accident occurred through a traction engine being struck by a G. T. P. train on a crossing near Fort Saskatchewan, the crew being seriously injured.

One of the boiler room helpers at the International Coal & Coke Company's plant, at Coleman, was scalded to death in April last, while in the act of knocking in the lower manhole in the front head of one of the horizontal tubular boilers. It appears from the evidence given at the inquest that the man thought the boiler was empty, on account of the steam having been blown off, and began to displace the manhole door. The boiler, however, contained water which was practically at boiling point. It was stated that he had not been instructed to undertake this work. The unfortunate man expired a few hours after the accident.

I would state that none of the foregoing accidents could have been anticipated by any provision of The Boilers Act.

Inspection of Compressed Air Reservoirs.

In compliance with Section 2, Clause 1, of the Act, we have investigated the pressures which are being carried on compressed air receivers and containers of all kinds, in a more thorough manner than aforesaid. We have also inquired into the installation of compressed air plants not included under our inspection, such as those in service in Public Garages, Free Air Stations, etc., a number of these having been pronounced by our Inspectors as entirely unsafe, although the Act at present merely governs the inspection of air receivers used in connection with steam driven air compressors.

Following your instructions, we went into this matter carefully and visited a number of places in Edmonton, Calgary and Lethbridge, where the plants in question are in operation. Our search confirmed what I have already reported to you, *i. e.*, in nearly every instance these small compressor plants are equipped with the regular galvanized steel hot water tank for air receivers, ranging in sizes from 30 to 150 gallons capacity and from 12 to 24 inches in diameter. They are constructed in one sheet of number 12 or 13 gauge (.109 inch and .093 inch) galvanized steel plate, the top head being convex and the lower concave on the outside. All joints single riveted with $\frac{1}{4}$ -inch steel rivets, average pitch $\frac{3}{4}$ -inch. At one or two places the tanks have single riveted shell with welded heads. Working pressures range from 100 to 200 pounds. The pressure of 100 pounds is fixed as a minimum on account of the tires on the large sized cars requiring to be inflated to 100 pounds. The Garage compressor plant is generally located at the repair shop end of the building, while at the free air stations the storage tank is situated at the front of the building as close to the sidewalk as can be arranged. I noted an 18 inches by 60 inches tank charged to 110 pounds pressure in a store window on 99th street, and this tank had no safety valve on it. Nearly all of these installations are of a temporary character, the whole being loosely arranged, including the air tanks, which should in every case be rigidly fixed. Several are supported on a three-legged kitchen tank stand and depend entirely on the pipe connections for support, while others lie loosely on wooden supports. Where the tanks are situated near the compressor a pipe coil should be inserted between, to allow the air to cool before entering the tank, but in some instances the tanks are not more than 18 inches from the compressor and are direct connected in a manner which allows the oil carried over with the air to deposit inside the tank, and these, I find, are seldom blown out, no adequate provision being made in the majority of cases to allow this being done. Another omission noted is that the air inlet on the compressors is not screened and the cylinders on some are not even air cooled. Consequently there is danger of heating through the collection of dusty air admitted through the inlet valves and afterwards discharged into the tank.

I was not able to make a correct report to you on the strength of the class of tank in general use as referred to above, since the quality and strength of material they contain is unknown to us. A carefully conducted test was therefore made on the tank you permitted us to use, by Inspector Cargill and myself on the 7th inst. The tank was fixed on trestles and after all connections had been made and gauge attached, measurements were taken and lines run lengthwise along each side of the longitudinal seams across the ends to permit of noting the deflection as the pressure increased. When this was applied we found that practically no measurable change occurred in the form of either the shell plate or heads until 400 pounds was reached, when the outer lap edge of the longitudinal seam left the lower plate about 1-32 inch for a distance of 4 inches about 8 inches from the top (convex) head, and several rivets along the seams began to leak slightly. Only a small sweat occurred at this point at 300 pounds, otherwise there was no sign of distress. At 450 pounds the longitudinal seam began to stretch and weaken rapidly, water foamed out around a large number of rivets with fine streams from between, and at 500 pounds the seam opened up suddenly with a loud report, and, beginning at the point noted above, the plate tore

through the centre line of the rivet holes for a distance of $21\frac{1}{2}$ inches, leaving an opening $1\frac{1}{4}$ inches wide and a bulge about $1\frac{1}{2}$ inches deep at the centre.

Dimensions of the tank mentioned are: Inside diameter $17\frac{5}{8}$ inches, length 4 ft. $8\frac{3}{4}$ inches between rivet centres, thickness 0.11 inches, rivet holes 5-16 in., pitch (irregular) $\frac{5}{8}$ in. to $\frac{3}{4}$ in., heads dished to 36 inches radius, 0.12 in. thick.

The test demonstrated that the factors of safety for similar tanks are approximately 5 to 100 pounds, 3.3 at 150 pounds and 2.85 at 175 pounds working pressure. That the quality of steel used is generally a low grade tank steel, having a high tensile strength, 89,000 pounds in this instance, and extra low in ductility, no doubt on account of rolling to this light weight from ingot size in one heat, and not afterwards properly annealed, the temperature of the zinc bath during its galvanizing process not being high enough to restore ductility in the steel.

It is estimated there are at least 250 air tanks in Garages and Free Air Stations in the province at the present time, 80% of these being the ordinary galvanized steel kitchen range hot water reservoir. At the pressures carried on these the factor of safety, in some instances, is not more than 2.5, which only leaves a margin of 0.5 above the elastic limit of the shell plate according to recent deductions. We consider 80 pounds to be a fair working air pressure for this class of tank. Upon reviewing the situation, I suggested that the Government take control of the pressure carried on all such receptacles by amending the Act, exempting those used for the keeping or storing of compressed air when attached to steam locomotives, street or railway cars, and motor vehicles within the meaning of the expression "Boiler" in Section 2, Clause 1. I would thank you for your favorable consideration of this matter, also for your cheerful assistance in making future provision as follows to safeguard the public against the explosion of these air vessels:

That all air tanks subject to inspection in future shall be properly equipped with accessories for ascertaining and regulating the pressure carried, also for discharging oil or dirt which is precipitated on the inside of tank.

That all such air compressor plants shall be properly and permanently installed.

That the inspection of air tanks carrying a pressure not exceeding 50 pounds be left to the discretion of the Inspector.

That all air tanks be inspected at least once every two years.

In addition to the foregoing, the Branch took up the question of allowable pressure on compressed air locomotive reservoirs, about 84 of these being used at the various mines throughout the province on 42 air locomotives. The working pressures carried on these ranged from 800 to 1,000 pounds per square inch. After a very careful survey and calculation it was decided to reduce the pressure on a number of them to a safer limit, the major portion having been in service for the past 10 or 12 years. It can be understood that this necessary precaution aroused some opposition from the Mine Officials, and it was sincerely regretted by ourselves that such a measure was un-

avoidable at a time when the question of output from the mines is so vital. I am pleased to state, however, that after going into the matter with these gentlemen and showing them the absolute necessity for such reduction, they have reasonably accepted the decision of the Department, and agreed to thus co-operate with us in the preservation of the lives of their employees, and this action on their part is much appreciated by the Department.

Referring to the staff of Inspectors: This has not been increased throughout the past year, and no changes have occurred or been deemed necessary, either in the districts or the men, excepting a minor change in the Drumheller section of the Medicine Hat district, which Inspector Gray advised could be more readily and economically worked by the Calgary staff. I regret to report the resignation of Inspector T. J. Hargreaves, Assistant Inspector at Lethbridge. His services were highly appreciated, as he was an able and diligent Civil Servant.

Regarding my duties as Chief Inspector: I have, under your instructions, attempted to generally supervise the operation and maintenance of the Provincial Government Power Plants from May, 1916, until October last, when, owing to the resignation of the Provincial heating Engineer, Mr. Johnson, who worked in conjunction with myself, you decided to relieve me of this extra duty on account of a re-arrangement in the Provincial Architect's staff. I am glad to say that this change has given me more opportunity of paying a more proper and undivided attention to the work of the Boilers Branch, which I trust you will find has materially benefited by your decision.

During the past year I have surveyed 77 designs of boilers and accessories, also 8 power plant designs, and conducted the correspondence therewith in arriving at an understanding with the principals in accordance with the Act and Regulations. The total fees collected for this service and registration of the approved designs amount to \$473.00.

There has been a scarcity this year of boilers for various branches of industry, owing to a shortage of material for this purpose, due to the demands of the present war, together with the high prices of all boiler material. This has naturally directed attention to many economic questions regarding boilers and their care and operation. The manufacturers in the Eastern provinces, who are faced with similar problems, have bought up many second hand boilers of all types, and other machinery not being utilized in the province which were available, and shipped them away, with the result that it is continually becoming more difficult, as the war drags on, to procure these for the necessary manufacture and development of the country's resources in this part of the Dominion.

We are glad to state that, notwithstanding the large number of Engineers who have been drafted into the Military and Naval Forces during the past year, we have been able to supply the demand and successfully fill all vacancies without materially reducing the standard of efficiency of Engineers, according to the requirements of Section 36 of the Act.

Referring to the expenditure and revenue of the Branch: I am pleased to report that by united effort on the part of the Inspectors and office staff, an appreciable reduction has been made in the difference between these items over and above those of the year 1916.

The total expenditure for the year was ----- \$31,858.46
 , The total revenue for the year was ----- \$20,462.35

The total number of boilers inspected during the year is 2,385.
 Of these, 193 were low pressure heating boilers.

A summary of the various types of boilers inspected during the year follows:

Horizontal Tubular -----	423
Horizontal Furnace -----	68
Return Tubular -----	44
Locomotive -----	1303
Vertical -----	170
Water Tube -----	112
Air Receivers -----	72
Steel Heating Boilers -----	97
Cast Iron Sectional Heating -----	96
Total -----	2385

The condition of these boilers was found to be as follows:

Good -----	1599
Fair -----	636
Moderate -----	112
Poor -----	27
Condemned -----	11
Total -----	2385

A total of 1,227 Engineers' Certificates was granted to successful candidates during the year.

Under the provisions of Section 34 of the Act, 341 Permits were issued to owners of boilers and engines who were unable at the time to secure the services of duly qualified engineers.

Convictions were obtained in ten cases of prosecution for violation of The Boilers Act. The aggregate fines imposed and collected amounted to \$449.85.

A schedule of fees collected, Expenditures of the Branch, and Inspectors' Annual Reports follow.

I have the honour to be, Sir,

Your obedient servant,

F. W. HOBSON,

Chief Inspector of Boilers.

SCHEDULE.

	1916	1917
Number of Certificates issued for boilers inspected	1860	2259
Number of advertised examinations held for engineers -----	26	29
Number of First Class Certificates issued -----	4	9
Number of Second Class Certificates issued -----	28	41
Number of Third Class Certificates issued -----	117	144
Number of Traction Final Certificates issued -----	270	230
Number of Firemen's Final Certificates issued -----	28	27
Number of Provisional Certificates issued -----	549	581
Number of renewals of Provisional Certificates issued -----	172	169
Number of Second Provisional Certificates issued -----	46	26
Number of Permits issued -----	323	341

FEES COLLECTED.

	1916	1917
For inspection of boilers -----	\$ 8,517.00	\$10,576.00
For special inspection of boilers, etc.---	564.70	1,955.85
For examination of candidates for Final Certificates -----	2,380.00	2,285.00
For Provisional Certificates -----	2,665.00	2,915.00
For renewal of Provisional Certificates	430.00	422.50
For Second Provisional Certificates ----	235.00	130.00
For Permits -----	1,615.00	1,705.00
For Survey of Drawings -----	236.50	473.00
Total -----	\$16,643.20	\$20,462.35

EXPENDITURES

For the year ending December 31st, 1917, in connection with the
administration of The Boilers Act.

Salaries and expenses -----	\$26,807.42
Automobile expenses -----	3,373.93
Railway transportation -----	637.50
Printing, advertising and sundries -----	1,039.61
Total -----	31,858.46

Lethbridge, January 2nd, 1918.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:—I have the honour to submit to you my annual report for the year ending December 31st, 1917, in accordance with Section 8 of The Boilers Act.

Engineers' examinations have been held in the Sherlock Block, Lethbridge, on the first Friday and Saturday throughout the year. The following shows the number and classes of certificates recommended to be issued:

First Class Certificates -----	3
Second Class Certificates -----	9
Third Class Certificates -----	23
Traction Final Certificates -----	49
Firemen's Final Certificates -----	2
Provisional Certificates -----	115
Renewal of Provisional Certificates -----	18
Failed -----	4
Total -----	223

A total of 256 boilers was inspected by me during the year, types and conditions of same being as follows:

Locomotive -----	142
Horizontal tubular -----	28
Internal furnace -----	17
Water tube -----	11
Vertical -----	12
Air receivers -----	36
Steel heating -----	9
Cast iron heating -----	1
Total -----	256

Condition of boilers inspected:

Good	177
Fair	70
Moderate	7
Condemned	2
Total	256

I made five special inspections of boilers during the year, all expenses incidental thereto being paid by the owners in accordance with the provisions of Section 6 of The Boilers Act. Ten days' time was taken up in connection with one of these special inspections.

District No. 1 comprises an area of over 14,000 square miles and it has proved impossible for only two inspectors to satisfactorily cover such a large territory. Consequently a considerable number of high pressure boilers have not been inspected this year.

I have issued 101 Permits during the year, under provisions of Section 34 of The Boilers Act.

No accidents have occurred in this district during the year in connection with the operation of boilers.

I have no cases to report relative to violation of The Boilers Act.

Letters received during the year	1599
Letters dispatched during the year	1870

I have the honour to be, Sir,

Your obedient servant,

NAT MARSHALL,

District Inspector of Boilers, No. 1 District.

Lethbridge, November 30th, 1917.

L. C. CHARLESWORTH, ESQ.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:—I have the honour to submit to you my annual report as assistant inspector of boilers, in the Lethbridge district, for the year ending December 31st, 1917, in accordance with Section 8 of The Boilers Act.

The total number of boilers inspected by me from January to November inclusive, is 305, types and conditions of same being as follows:

Locomotive	174
Horizontal tubular	52
Return tubular	4
Internal furnace	3
Water tube	18
Vertical	9
Air receivers	16
Steel heating	25
Cast iron heating	4
Total	305

Condition of boilers inspected:

Good -----	224
Fair -----	69
Moderate -----	8
Condemned -----	4
Total -----	305

Twelve special inspections of boilers were made during the year at the request of the respective owners, all expenses incidental thereto being defrayed by them as required by Section 6 of the Act.

Twenty-nine Permits were issued by me under Section 34 of the Act to owners of steam boilers, who at the time were unable to secure the services of engineers holding the necessary certificates.

While on inspection work during the summer, I found it necessary to prosecute four owners of boilers, under Sections 33 and 54 of The Boilers Act. In each case a conviction was obtained and the penalty imposed.

Consequent upon a change in my plans, I am resigning my position as assistant inspector of boilers, my services terminating on the 30th of November.

I have the honour to be, Sir,

Your obedient servant,

THOMAS J. HARGREAVES,

Asst. Inspector of Boilers, No. 1 District.

Calgary, January 3rd, 1918.

L. C. CHARLESWORTH, ESQ.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:—I have the honour to submit to you my annual report as inspector of boilers in District No. 2, for the year ending December 31st, 1917, in accordance with Section 8 of The Boilers Act.

Examinations of candidates for engineers' certificates have been held here on the first Saturday of each month throughout the year. The following summary shows a creditable number of candidates satisfactorily qualifying for Final Certificates:

First Class Certificate -----	1
Second Class Certificate -----	15
Third Class Certificate -----	36
Traction Final Certificate -----	60
Fireman's Final Certificate -----	8
Provisional Certificate -----	99
Total -----	219

The number of boilers inspected and certificates issued therefor during the year total 165, types and conditions of same being as follows:

Locomotive	53
Horizontal tubular	54
Internal furnace	5
Water tube	15
Vertical tubular	29
Marine type	6
Cast iron heating	3
Total	165

Condition of boilers inspected:

Good	94
Very fair	48
Fair	23
Total	165

Seventy-four Permits were issued in accordance with Section 34 of The Boilers Act.

I am pleased to report that no fatal accidents have occurred in this district during the year.

I have the honor to be, Sir,

Your obedient servant,

JOS. BUXTON,

Inspector of Boilers, District No. 2.

Calgary, January 2nd, 1918.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:—I have the honour to submit to you my annual report as Assistant Inspector of Boilers, in District No. 2, for the year ending December 31st, 1917.

The months of January, February and March were devoted to the inspection of boilers in the City of Calgary, and stationary boilers that could be reached along the line of the railways. The rest of the year my time was occupied inspecting traction boilers in the country districts. I also assisted Mr. Buxton with the regular monthly examinations of candidates for engineers' certificates, and recommended the issue of 49 Provisional Certificates and 4 renewals of Provisional Certificates.

The number of boilers inspected during the year totals 311, types and conditions of same being as follows:

Locomotive	184
Horizontal tubular	46
Water tube	21
Vertical tubular	42

Return flue -----	1
Marine dry back -----	3
Air receivers -----	12
Cast iron sectional -----	2
Total -----	311

Condition of boilers inspected:

Good -----	200
Fair -----	106
Poor -----	4
Condemned -----	1
Total -----	311

There was an explosion of a hot water gravity system heating plant in the early part of the year, an account of which has been forwarded to the Department.

I have to report one case of prosecution under Section 33 of the Act.

I have the honour to be, Sir,

Your obedient servant,

A. W. DICK,

Asst. Inspector of Boilers, District No. 2, Calgary.

Camrose, January 22nd, 1918.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:—I have the honour to submit to you my annual report as Inspector of Boilers, in District No. 3, for the year ending December 31st, 1917, in accordance with Section 8 of The Boilers Act.

Examinations of candidates for engineers' certificates have been held in the Fire Hall, Camrose, on the first Saturday of each month, in addition to the spring examinations which were held at 10 important towns in my district during the months of February and March. As a result of these I recommended the issue of certificates to 230 successful candidates, grading as follows:

Second Class Certificates -----	5
Third Class Certificates -----	15
Traction Final Certificate -----	40
Fireman's Final Certificate -----	3
Provisional Certificate -----	116
Renewal of Provisional Certificate -----	30
Second Provisional Certificate -----	21
Total -----	230

Twenty-one candidates failed to qualify for the class written for but were granted certificates of a lower grade; five others not having the necessary experience were put back until same was obtained.

During the months of January and February I inspected the stationary boilers in Camrose and Ponoka, and early in April I started through to Hardisty by team to inspect agricultural boilers. The roads at that time were in a worse condition than at any period since I started inspecting, the main road between Bawlf, Daysland and Killam being almost impassable in several places. Traveling the same road some six months later I was pleased to note a great improvement, all bad places had been repaired and ditched, and there was not a single mud hole on the road.

The district covered by me during the year was from Hardisty, north to the Grand Trunk Pacific, south to township 34, and west to the Red Deer River and the Calgary and Edmonton Railroad inclusive.

A total of 225 boilers was inspected by me, certificates being issued for 218. The following summary shows the type and condition of boilers inspected:

Locomotive -----	162
Horizontal tubular -----	19
Internal furnace -----	2
Water tube -----	2
Return flue -----	5
Marine -----	2
Vertical tubular -----	5
Air receivers -----	4
Heating (cast iron) -----	12
Heating (steel) -----	12
Total -----	225

Condition of boilers inspected:

Good -----	149
Very fair -----	55
Fair -----	13
Poor -----	1
Not in use -----	4
Under repairs -----	3
Total -----	225

Four of the seven boilers for which no certificates were issued had not been used since last inspection, and three others I would not issue a certificate for until repaired and hydrostatically tested.

No explosions have occurred in the district, but in the locomotive type quite a few crown sheets were damaged, due in nearly all cases to not keeping the fusible plug in an efficient working condition. One fire box tube sheet was found cracked and distorted so badly that a new tube sheet must be fitted. The damage to sheet was done by a man who posed as a boilermaker, and I believe this was his first, and I hope his last, attempt at boiler repairing in Alberta. He is now back in North Dakota, where he will no doubt find wider scope for his peculiar abilities.

Another accident was reported which occurred at the Calgary Collieries, Ardley, due to the bagging of a 60 inches by 14 feet Horizontal Tubular boiler in the centre of the first course. This is the worst bulge I have ever seen and it is a miracle that the boiler did not explode. The dimensions of the bulge are 28 inches circumferentially by 20 inches longitudinally by 8 inches deep. The metal drew from 7-16 inch to 1-16 inch before it started to let go,

the pressure carried being 130 pounds per square inch. Red Deer River water, which scales badly, was used in the boiler for a number of months, and they then switched to mine water, which is very soft and at that time was very dirty owing to a cave-in in the mine. The soft water loosened up the scale on the tubes and this deposited with the mud on the heating surface, resulted in the consequences mentioned above. Owing to the conflicting evidence given by the lessee of the mine and the engineer as to the washing out of the boiler, I deemed it only just to give the engineer the benefit of the doubt, and recommended the suspension of his certificate for six months only.

There has been a large falling off in the number of new boilers coming into my district this year, owing mainly, I think, to the strong competition from the one-man gasoline farm tractor, and under the present conditions of labour I believe the farmer is well advised in buying them, as in a number of instances this fall the larger threshing outfits were running short-handed and barely paying expenses.

Eleven special inspections of boilers were made by me in different parts of the district during the year, all expenses in connection therewith being paid by the owners, in accordance with Section 6 of the Act. I was also called in to advise on the installation of an acetylene gas generator, but after showing the purchaser the faulty construction and defects in the lay-out he decided not to use it.

Correspondence has increased this year, a total of 1,337 letters being dispatched from this office for the twelve months.

Thirty-two Permits were issued under the provisions of Section 34 of The Boilers Act to enable owners to keep their plants in operation until such time as they could secure a qualified engineer.

I am pleased to be able to report that no accidents entailing personal injury to anyone in connection with the operation of boilers and engines has come under my notice during the year.

I have the honour to be, Sir,

Your obedient servant,

JNO. DOUGLAS,

Inspector of Boilers, District No. 3.

Camrose, January 18th, 1918.

L. C. CHARLESWORTH, ESQ.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:—I have the honour to submit to you my annual report as Assistant Inspector of Boilers, in No. 3 District, for the year ending December 31st, 1917, in accordance with Section 8 of The Boilers Act.

During the months of January, February and March I inspected in the towns of Wetaskiwin, Camrose, Stettler, Big Valley, Alix,

Lacombe, Bowden and Innisfail. Early in April I started out by team from Leduc and inspected all the boilers north of Township 47 and west of the Grand Trunk main line. I then worked my way east, inspecting all boilers north of the Grand Trunk up to Township 50 and west of the Saskatchewan boundary. Returning to Leduc, I worked in west to Pokenessett, then south to Township 39, inspecting all boilers west of the Calgary and Edmonton Railway on this trip.

A total of 281 boilers was inspected by me during the year, types of the same being as follows:

Locomotive	165
Horizontal tubular	37
Return flue	11
Vertical	23
Air receivers	2
Cone ended drum (digester)	1
Cast iron heating	29
Steel heating	13
Total	281

Condition of boilers inspected:

Good	166
Very fair	79
Fair	31
Poor	3
Condemned	2
Total	281

Boilers inspected and no certificates issued therefor, 15.

Fourteen new locomotive type boilers were inspected and passed by me during the year, the workmanship in all cases was good, but in several instances I found the fittings were not of the approved Alberta type, and in order not to impose a hardship on the buyer the manufacturer in each case was given ample time to rectify this. I am pleased to state that in every instance regulation fittings were supplied without any further trouble.

Seven special inspections were made during the year, all expenses incidental thereto being paid by the owner in accordance with Section 6 of the Act.

I recommended the issue of Provisional Certificates to six applicants, and the renewal of three others for a further period of one year.

Ten Permits were issued by me under the provision of Section 34, to owners who were unable to secure the services of duly qualified engineers.

Three cases of violation of Section 33 of the Act were reported to me, the information being turned over to the Provincial Police, who succeeded in obtaining convictions in two of the cases.

I am pleased to report that no accidents have occurred resulting in personal injury to anyone connected with the operation of boilers in the district covered by me.

I have the honour to be, Sir,

Your obedient servant,

J. F. HAWKINS,

District Inspector of Boilers, District No. 3.

Edmonton, January 2nd, 1918.

L. C. CHARLESWORTH, ESQ.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:—I have the honour to submit to you my annual report as District Inspector of Boilers for the year ending December 31st, 1917, in accordance with Section 8 of The Boilers Act.

The early part of the year was devoted to inspection of boilers in the district west of Edmonton, which were accessible by G.T.P. and C. N. Railroads, also to inspection work in and around Edmonton.

During March I held examinations at ten outside points of candidates for engineers' certificates. These examinations had been previously advertised, but the number of candidates presenting themselves was rather disappointing. Examinations have also been held in the Orange Hall, Edmonton South, on the first Saturday of each month throughout the year. The following summary shows the number and classes of certificates recommended:

First Class Certificate	2
Second Class Certificate	9
Third Class Certificate	49
Traction Final Certificate	41
Fireman's Final Certificate	12
Provisional Certificate	137
Renewal of Provisional Certificate	18
Total	268

Twelve candidates failed to pass for the class written for, but were granted certificates of a lower grade, and nine applicants were refused examination owing to inability to produce evidence of having had the necessary experience required by The Boilers Act.

The total number of boiler inspections made by me during the year is 281, and the number of certificates issued 266, two of these being issued under Clause 5 of Section 5 of the Act.

The various types of boilers inspected are enumerated as follows:

Horizontal tubular	109
Water tube	38
Locomotive	58
Vertical	39
Internal furnace	15
Return flue	3
Marine	4
Sterilizers	3
Incinerator	1
Cast iron sectional	11
Total	281

Condition in which the foregoing were found:

Good	197
Fair	70
Moderate	12
Bad	2
Total	281

During the year, I made eleven special inspections of boilers at the request of the respective owners, all expenses incidental thereto being defrayed by them, as required by Section 6 of the Act.

The most serious accident to a boiler which came under my notice during the year was the collapse of the furnace of a Robb Brady boiler. This was undoubtedly due to shortness of water and might easily have resulted in far-reaching consequences, but fortunately the furnace plate did not fracture and no injury to anyone resulted.

I have also to report the failure of a 6-inch steam pipe bend attached to a Bellis & Morecam engine. The end of the pipe pulling clear out of one flange, it was thus thrown back and pulled out at the other end, and being released, was projected a distance of 25 feet. This accident was attributable to continued vibration and defective pipe fitting, as an excessive taper was used in fitting the end in the flange and was not screwed in the full depth of the flange. Fortunately no personal injury was sustained by anyone.

Although no fatal accidents have occurred attributable to boiler deficiencies, I have to report that in the operation of traction engines two men lost their lives, one being drawn into the gears and the other being crushed under the driving wheels as the engine backed down an incline.

Under Section 34 of the Act eleven Permits were issued to owners of steam boilers, who at the time were unable to secure the services of duly qualified engineers.

I have no cases to report regarding violation of any sections of The Boilers Act.

I have the honour to be, Sir,

Your obedient servant,

J. F. CARGILL,

District Inspector of Boilers, District No. 4.

Edmonton, January 2nd, 1918.

L. C. CHARLESWORTH, ESQ.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:—I have the honour to submit to you my annual report as Assistant Inspector of Boilers, District No. 4, for the year ending December 31st, 1917, in accordance with Section 8 of The Boilers Act.

During the greater part of January and February my time was taken up with the inspection of boilers situated between Entwistle and Edson and along the Brazeau branch line. Most of these boilers were accessible over the lines of the G.T.P. Ry. but in some instances hiring of team was necessary.

During the month of March I held examinations of candidates for engineers' certificates at High Prairie, Spirit River, Peace River and Grande Prairie; full particulars had been previously advertised

covering the same. The number of successful candidates examined for certificate totalled 63. These tabulated as follows:

Provisional Certificates	39
Traction Final Certificates	5
Renewals of Provisional Certificates	19
Total	63

One of the candidates failed to qualify for Third Class but was granted a Provisional Certificate. A few other applicants were turned down for lack of experience.

From April to December my inspection itinerary covered that portion of the district east to Vermilion, from the southern boundary to the Saskatchewan River. All steam outfits located due north of Fort Saskatchewan and along the north bank of the river as far as Saddle Lake Reserve were also inspected.

The number of boilers inspected during the year totals 255, types and condition of same being as follows:

Locomotive	173
Horizontal tubular	39
Water tube	2
Vertical	12
Return tubular	13
Internal furnace	10
Cast iron sectional	4
Horizontal furnace	2
Total	255

Condition of boilers inspected:

Good	163
Fair'	78
Poor	3
Undergoing repairs	9
Condemned	2
Total	255

Eleven special inspections of boilers were made during the year at the request of the owners, who in each case defrayed all expenses incidental thereto, in accordance with the requirements of Section 6 of the Act. For setting and sealing nine other safety valves, fees were charged and remitted.

Twenty-five Permits were issued during the year, in accordance with the provisions of Section 34 of the Act, on account of the difficulty experienced in obtaining qualified engineers.

I have no boiler explosions to report, but one sad accident occurred where a man was caught in the gear of a steam traction engine and fatally injured. The Coroner rendered a verdict of death from suffocation, due to the victim not being quickly extricated.

Convictions were obtained during the year in three cases, two for violation of Section 33 and one for violation of Section 19 of the Act, the minimum fine with costs being imposed in each case.

I have the honour to be, Sir,

Your obedient servant,

JNO. H. MAINWARING,

Assistant Inspector, District No. 4.

Medicine Hat, January 2nd, 1918.

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:—I have the honour to submit to you my annual report for the year ending December 31st, 1917, in accordance with Section 8 of The Boilers Act.

Examinations of candidates for engineers' certificates were held here on the first Saturday of each month throughout the year, a total of 100 candidates being examined and recommended for certificates as follows:

First Class Certificate	1
Second Class Certificate	1
Third Class Certificate	8
Traction Final Certificate	16
Fireman's Final Certificate	1
Provisional Certificates	58
Renewal of Provisional Certificates	15
Total	100

I inspected a total of 306 boilers during the year, and the following is a summary of the types and condition of same:

Good	229
Moderate	18
Fair	57
Poor	2
Total	306

Types of boilers inspected:

Locomotive	192
Horizontal tubular	39
Water tube	5
Vertical tubular	6
Return flue	5
Heating (steel)	32
Heating (cast iron)	25
Air receivers	2
Total	306

Thirty-seven Permits were issued under Section 34 of The Boilers Act, to owners who were unable to secure the services of certified engineers.

I have no cases of accidents to report in connection with the operation of boilers and engines during the year.

I have the honour to be, Sir,

Your obedient servant,

WM. GRAY,

Inspector of Boilers, District No. 6, Medicine Hat.

ACCOUNTANT'S BRANCH

L. C. CHARLESWORTH, ESQ.,
Deputy Minister of Public Works,
 Edmonton, Alta.

Sir:—As Accountant of the Department of Public Works, I have the honour to report on the work of the Branch for the year ending December 31st, 1917, the details being as follows:

Number of accounts passed to the Treasury Department for payment during the year	15,983
Number of accounts passed for payment in connection with Local Improvement Trust Account "A" during the year	1,104
Total number of vouchers	17,087

This total of 17,087 vouchers represented 20,974 accounts and 5,593 pay lists, making, altogether, 26,567 accounts examined and passed for payment during the year.

All accounts were posted to their respective ledgers, which have been duly audited by the Provincial Auditor and found correct.

Number of cheques issued in connection with Local Improvement Trust Account "A" during year	3,345
Number of cheques issued in connection with General Revenue Suspense Account during the year	253
Total number of cheques	3,598

The total amount of Revenue received from all sources and deposited with the Provincial Treasurer was \$109,198.26. The total amount placed to the credit of General Revenue Suspense Account was \$7,994.16. Of this amount there was transferred to General Revenue and refunded, \$5,372.07, leaving a Cash Book balance on hand at December 31st, 1917, of \$2,622.09.

Details of the above amounts were duly posted to their respective cash books, which have been audited by the Provincial Auditor, and found correct.

A comparison of the total Revenue received during 1917 as compared with the previous year, shows an increase of \$36,161.32. This is explained by an increase in revenue received from the Steam Boilers Branch of about \$4,000.00, new revenues from the Mines Branch for Leases of Coal Mines, under Road Allowances, and also royalties on the coal mined, amounting to some \$6,800.00, the balance being accounted for by the Stock Advance Account, disbursements of this account passing through the General Revenue Cash Book.

The above details, as compared with the previous year, show an all round increase in the work of this Branch.

The staff consisted of the Accountant, Assistant Accountant, six clerks and a messenger.

Respectfully submitted,

TOM S. S. DAVIS,
Accountant.

CORRESPONDENCE BRANCH

L. C. CHARLESWORTH, Esq.,

Deputy Minister of Public Works,

Edmonton, Alta.

Sir:—I have the honour to submit herewith the annual report of the Correspondence Branch of the Public Works Department for the year ending December 31st, 1917.

Branch.	Letters Received.	Letters Sent.	Postage.	War Tax
Engineering -----	34,264	27,885	\$ 709.43	\$221.26
Surveys -----	11,966	12,358	259.62	69.87
Coal Mines -----	8,292	7,896	194.94	56.17
Steam Boilers -----	4,171	4,335	169.75	37.87
	<u>58,693</u>	<u>52,474</u>	<u>\$1,333.74</u>	<u>\$385.17</u>

CASH RECEIVED.

Branch.	Entries.	Amount.
Engineering -----	341	\$21,460.65
Surveys -----	252	5,563.11
Coal Mines -----	666	14,884.09
Steam Boilers -----	633	20,558.20
	<u>1892</u>	<u>\$62,466.05</u>

Cash received and transferred to other departments ----- \$5,355.59

Registered letters sent -----	6,306
Registered letters received -----	1,100

NEW FILES MADE AND INDEXED.

Engineering Branch -----	774
Surveys Branch -----	917
Coal Mines Branch -----	84

1,775

In addition to the foregoing, the work of re-indexing our files commenced in 1916 was completed.

The following comparative statement shows a considerable increase of work over that of the previous year:

	1916	1917
Number of letters received -----	52,638	58,693
Number of letters sent -----	47,757	52,474
Total number of communications -----	<u>100,395</u>	<u>111,167</u>
Number of items of cash received -----	1,564	1,892
Amount of cash received -----	\$49,778.96	\$62,466.05
Number of registered letters received -----	915	1,100
Number of registered letters sent -----	5,091	6,306
Amount of postage used -----	\$1,181.33	\$1,333.74
War tax -----	<u>348.27</u>	<u>385.17</u>
Number of new files made and indexed -----	1,381	1,775

Respectfully submitted,

W. T. AIKEN,

Chief Correspondence Clerk.



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